

United States
Environmental Protection Agency

1989 Hazardous Waste Report

INSTRUCTIONS AND FORMS

Public reporting burden for this collection of information is estimated to average 11 hours per response. The reporting burden includes time for reviewing instructions, gathering data, and completing and reviewing the questionnaire.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to:

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Washington, DC 20460

and

Office of Management and Budget
Paperwork Reduction Project
Washington, DC 20503

1989 HAZARDOUS WASTE REPORT

TABLE OF CONTENTS

INTRODUCTION	Page
Authority	1
Overview of the 1989 Hazardous Waste Report	1
WHO MUST FILE THE 1989 HAZARDOUS WASTE REPORT	2
Sites Required to File the Report	2
Sites Not Required to File the Report	2
WHEN AND WHERE TO FILE	3
Filing Deadline	3
Extension of Filing Deadline	3
Address to Return Completed Forms	iii
WHICH FORMS TO COMPLETE	4
Form IC	4
Form GM	4
Form WR	4
Form PS	4
Form OI (If required by State)	4
HOW TO COMPLETE THE FORMS	4
Assistance Help Line	4
Documents Helpful in Completing the Forms	5
Site ID Labels	5
Code Lists	5
Skip Instructions	5
Don't Know or Not Applicable Responses	5
Right Justification of Quantities	5
Comments Section on Forms	6
Photocopies of Forms.....	6
Page Numbering of Forms	6
Example 1989 Hazardous Waste Report Forms for Hypothetical Sites	6
Electronic Reporting	6
Confidential Business Information	6
INSTRUCTIONS FOR FORM IC - IDENTIFICATION AND CERTIFICATION	7
INSTRUCTIONS FOR FORM GM - GENERATION AND MANAGEMENT	14
INSTRUCTIONS FOR FORM WR - WASTE RECEIVED FROM OFF SITE	27
INSTRUCTIONS FOR FORM PS - WASTE TREATMENT, DISPOSAL, OR RECYCLING PROCESS SYSTEMS	30

1989 HAZARDOUS WASTE REPORT

TABLE OF CONTENTS

	Page
DEFINITIONS	45
STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES	53
Agriculture	53
Mining	53
Construction	53
Manufacturing	53
Transportation and Utilities	55
Wholesale Trade	56
Retail Trade	56
Finance, Insurance, and Real Estate	56
Services	57
Public Administration	58
Nonclassifiable Establishments	58
EXCLUDED WASTES	59
EPA HAZARDOUS WASTE CODES	61
Characteristic Hazardous Waste (D Codes)	61
Hazardous Waste from Nonspecific Sources (F Codes)	61
Hazardous Waste from Specific Sources (K Codes)	63
Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof -- Acute Hazardous Waste (P Codes)	66
Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof -- Toxic Waste (U Codes)	70
SOURCE CODES	78
FORM CODES	80
Lab Packs	80
Liquids	80
Solids	80
Sludges	81
Gases	82
SYSTEM TYPE CODES	83
ACTIVITY CODES	85
APPENDIX A: EXAMPLES OF COMPLETED 1989 HAZARDOUS WASTE REPORT FORMS	A-1
APPENDIX B: INSTRUCTIONS FOR ELECTRONIC REPORTING	B-1
FORMS	

Return this Report to the State or Regional office listed below.

Alabama

Alabama Land Division - Report Section
Alabama Department of Environmental Management
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Alaska

Alaska Department of Environmental Conservation
P.O. Box 0
Juneau, Alaska 99811-1800
(907) 465-2671

Arizona

Arizona Department of Environmental Quality
Office of Waste Programs
2005 N. Central Avenue
Phoenix, Arizona 85004

Arkansas

Arkansas Department of Pollution Control
and Ecology
Hazardous Waste Division
P.O. Box 9583
Little Rock, Arkansas 72219

California

California Department of Health Services
Toxic Substances Control Program
Annual Report
P.O. Box 3000
Sacramento, California 95812

Colorado

Hazardous Materials & Waste Management Division
Colorado Department of Health
4210 E. 11th Avenue
Denver, Colorado 80220
(303) 331-4830

Connecticut

Connecticut Bureau of Waste Management
Planning & Standards Division
165 Capital Avenue
Hartford, Connecticut 06106
Attn: Paul Franson

Delaware

Delaware Department of Natural Resources
& Environmental Control
Division of Air and Waste Management
Hazardous Waste Management Branch
P.O. Box 1401, 89 Kings Highway
Dover, Delaware 19903
(302) 736-3689

District of Columbia

Department of Consumer and Regulatory Affairs
Environmental Control Division
Hazardous Waste Section
2100 Martin Luther King, Jr. Avenue, S.E.
Room 204
Washington, D.C. 20020

Florida

U.S. EPA Region IV
Hazardous Waste
345 Courtland St. N.E.
Atlanta, GA 30365

Georgia

Georgia Environmental Protection Division
Hazardous Waste Management Program
205 Butler Street, S.E., Suite 1154
Atlanta, Georgia 30334
Attn: Biennial Report

Guam

Guam Environmental Protection Agency
P.O. Box 2999
Agana, Guam 96910

Hawaii

Hawaii Department of Health
Solid & Hazardous Waste Branch
Five Waterfront Plaza, Suite 250
500 Ala Moana Blvd.
Honolulu, Hawaii 96813

Idaho

Idaho Department of Health & Welfare
Hazardous Materials Bureau
450 West State Street
Boise, Idaho 83720
(208) 334-5879

Illinois

Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Springfield, Illinois 62706
(217) 782-6760

Iowa

U.S. EPA Region VII
RCRA Branch
726 Minnesota Avenue
Kansas City, Kansas 66101
Attn: Biennial Report

Kansas

Kansas Bureau of Waste Management
Department of Health and Environment
Forbes Field, Building 321
Topeka, Kansas 66620
(913) 862-9360 Ext. 290

Kentucky

Kentucky Division of Waste Management
Department of Environmental Protection
Cabinet for Natural Resources
& Environmental Protection
18 Reilly Road
Frankfort, Kentucky 40601
Attn: Suda Veera

Louisiana

Louisiana Department of Environmental Quality
Hazardous Waste Division
Office of Solid and Hazardous Waste
P.O. Box 44307
Baton Rouge, Louisiana 70804
Attn: Vince Sagnibene

Maine

U.S. EPA Region 1
Waste Management Division
JFK Federal Building
Boston, MA 02203-2211
Attn: Biennial Report

Maryland

Maryland Department of Environment
Hazardous Waste Program
2500 Broening Highway
Building 40-2nd floor
Baltimore, Maryland 21224
(301) 631-3345

Massachusetts

U.S. EPA Region I
Waste Management Division
JFK Federal Building
Boston, MA 02203-2211
Attn: Biennial Report

Michigan

U.S. EPA Region V
RCRA Activities
Waste Management Division
P.O. Box A3587
Chicago, IL 60690
Attn: Biennial Report

Mississippi

Mississippi Division of Solid and Waste Management
Bureau of Pollution Control
Department of Natural Resources
P.O. Box 10385
Jackson, Mississippi 39209

Missouri

Missouri Waste Management Program
Department of Natural Resource
P.O. Box 176
Jefferson City, Missouri 65102-0176

Montana

Montana Solid and Hazardous Waste Bureau
Department of Health and Environmental Sciences
Cogswell, Bldg., Room B-201
Helena, Montana 59620

Nebraska

Nebraska Hazardous Waste Management Section
Department of Environmental Control
State House Station
P.O. Box 94877
Lincoln, Nebraska 68509

Nevada

Nevada Division of Environmental Protection
Waste Management Section
201 South Fall Street
Carson City, Nevada 89710

New Hampshire

New Hampshire Waste Management Division
Reporting Section
Dept. of Environmental Services
6 Hazen Drive
Concord, New Hampshire 03301

New Jersey

New Jersey Department of Environmental Protection
Division of Waste Management
Bureau of Hazardous Waste Classification and
Manifests
401 East State Street, CN-028
Trenton, New Jersey 08625

New York

Mr. John Iannotti, Director
Bureau of Pollution Prevention
New York State Department of Environmental
Conservation
50 Wolf Road
Albany, NY 12233-7253

North Carolina

Hazardous Waste Section
Solid Waste Management Division
P.O. Box 27687
Raleigh, North Carolina 27611-7687
(919) 733-2178

North Dakota

North Dakota Division of Hazardous Waste
Management and Special Studies
Department of Health
1200 Missouri Avenue, Room 302
Bismarck, North Dakota 58502-5520

Oklahoma

Oklahoma State Department of Health
Waste Management Service
P.O. Box 53551
Oklahoma City, OK 73152
Attn: Jack Badgett

Oregon

Oregon Department of Environmental Quality
Hazardous Waste Program Development Section
811 Southwest 6th Avenue
Portland, Oregon 97204
(800) 452-4011 or (503) 229-5913

Pennsylvania

Pennsylvania Department of Environmental Resources
Bureau of Waste Management
P.O. Box 8550
Harrisburg, Pennsylvania 17105-8550
(717) 783-9253

Puerto Rico

Puerto Rico Environmental Quality Board
Land Pollution Control Area
Inspection, Monitoring and Surveillance
P.O. Box 11488
Santurce, Puerto Rico 00910-1488
(809) 722-0439

South Carolina

South Carolina Department of Health and
Environmental Control
Bureau of Solid and Hazardous Waste Management
2600 Bull Street
Columbia, South Carolina 29201
(803) 734-5200

South Dakota

South Dakota Office of Air Quality and Solid Waste
Department of Water and Natural Resources
Foss Building
523 E. Capitol
Pierre, South Dakota 57501-3181

Tennessee

Tennessee Department of Public Health
Division of Solid Waste Management
701 Broadway
Customs House, 4th Floor
Nashville, Tennessee 37219-5403

Texas

Texas Water Commission
Hazardous and Solid Waste Division
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087
(512) 463-7764

Utah

Utah Bureau of Solid and Hazardous Waste
Management
Department of Health
P.O. Box 16700
288 North 1460 West
Salt Lake City, Utah 84116-0700

Vermont

Vermont Hazardous Waste Program
103 South Main Street
Waterbury, Vermont 05676
Attn: Steve Singer

Virgin Islands

U.S. EPA Region II
Permits Administration Branch
26 Federal Plaza, Room 505
New York, New York 10278
Attn: Biennial Report

Virginia

Virginia Department of Waste Management
Monroe Building, 11th Floor
101 North 14th Street
Richmond, Virginia 23219
(804) 225-2667

Washington

Washington Department of Ecology
Mail Stop PV-11
Hazardous Waste Section R/6
Olympia, Washington 98504-8711
Attn: Waste Minimization Report
(800) 874-2022

West Virginia

West Virginia Department of Natural Resources
Division of Waste Management
1260 Greenbrier Street
Charleston, West Virginia 25311
(304) 348-5935

Wisconsin

Wisconsin Bureau of Solid Waste
Department of Natural Resources
P.O. Box 7921
Madison, Wisconsin 53707

Wyoming

U.S. EPA Region VII
Hazardous Waste Management Division (8HWM-ON)
999 18th Street, Suite 500
Denver, Colorado 80202-2405
Attn: Biennial Report

INSTRUCTIONS FOR COMPLETING THE 1989 HAZARDOUS WASTE REPORT

INTRODUCTION

This package is prepared by the U. S. EPA for generators and treatment, storage, and disposal facilities to report their hazardous waste activities for 1989. The information will be used to facilitate waste capacity studies, waste tracking, and assessment of waste minimization activities, and to support State hazardous waste programs.

Authority

Your site may be required to complete this report under the Resource Conservation and Recovery Act of 1976.

The authorizing legislation for the 1989 Hazardous Waste Report is contained in Sections 3002, 3004, and 3007 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). Sections 3002 and 3004 require hazardous waste generators and treatment, storage, and disposal facilities to report to EPA or authorized States at least every two years addressing: the quantities, nature, and disposition of generated hazardous waste and the efforts taken to reduce the volume and toxicity of hazardous waste in comparison to previous years. Section 3007 authorizes EPA and authorized States to obtain additional data to support development or enforcement of RCRA regulations. *

Overview of the 1989 Hazardous Waste Report

To determine if you are required to complete the report, read **WHO MUST FILE THE 1989 HAZARDOUS WASTE REPORT** on page 2. A postcard is provided for sites that are not required to report.

WHEN AND WHERE TO FILE, page 3, provides the filing date and details the procedures to obtain an extension of the filing date for your site. The return address for your site is specified on page iii.

The EPA 1989 HAZARDOUS WASTE REPORT SUBMISSION CHECKLIST, page 3, will help you determine if your submission is complete.

WHICH FORMS TO COMPLETE, page 4, describes circumstances and situations under which each of the forms should be completed.

Explanations of the conventions used to complete the report forms are specified on pages 4 through 6, **HOW TO COMPLETE THE FORMS**. Also provided is the number of a telephone assistance help line to assist you with questions not addressed by the instructions.

Detailed instructions for completing each of the forms begin on page 7. Definitions of key terms and explanations of acronyms and abbreviations are found on pages 45 to 52. Lists of codes that are too long for inclusion in the text of the instructions begin on page 53. Appendix A provides examples of how three hypothetical sites would complete the 1989 Hazardous Waste Report. Appendix B provides instructions and file layouts for sites that wish to submit their Report on electronic media.

WHO MUST FILE THE 1989 HAZARDOUS WASTE REPORT

Sites Required to File the Report

You are required to file the 1989 Hazardous Waste Report if this site met the definition of a RCRA Large Quantity Generator (LQG) during 1989, or

this site treated, stored, or disposed of RCRA hazardous wastes on site in units subject to RCRA permitting requirements during 1989. See WHICH FORMS TO COMPLETE, page 4, to determine which forms must be submitted.

Definition of a RCRA Large Quantity Generator

This site is a large quantity generator if, in 1989, the site met **any** of the following criteria:

- (a) The site generated in any single month 1,000 kg (2,200 lbs) or more of RCRA hazardous waste; **or**
- (b) The site generated in any single month or accumulated at any time 1 kg (2.2 lbs) of RCRA acute hazardous waste; **or**
- (c) The site generated or accumulated at any time more than 100 kg (220 lbs) of spill cleanup material contaminated with RCRA acute hazardous waste.

NOTE: Wastes treated in exempt units are not to be counted in determining if a site is a Large Quantity Generator. However, if a site is required to file the Hazardous Waste Report, wastes treated in exempt units are to be reported.

Sites NOT Required to File the Report

You are not required to file the 1989 Hazardous Waste Report if, during 1989, this site was NOT a RCRA Large Quantity Generator and did NOT treat, store, or dispose of RCRA hazardous wastes on site in units subject to RCRA permitting requirements. However, you are requested to return the postcard found at the end of this booklet, indicating that you are exempt from the report requirement. EPA will use the postcards to distinguish sites that are exempt from reporting from those sites that are out of compliance.

WHEN AND WHERE TO FILE

EPA regulations contained in 40 CFR 262.41, 264.75, and 265.75 require submission of 1989 RCRA Biennial Reports by March 1, 1990.

Should more time be required to complete this report, send a written request for a **site-specific extended due date** to the office listed below. Specify the date you are requesting, **which in no case shall be after April 1, 1990**, and the reason for the request. Attach one of the pre-printed Site Identification labels, if you received them, or include the site's name, location, and EPA Identification Number.

Return this Report to the address listed for your State on page iii.

EPA 1989 HAZARDOUS WASTE REPORT SUBMISSION CHECKLIST

Please review the following checklist to make sure that your site's submission is complete and correct.

Have you:

- ☐ Included Form IC, answering questions on both front and back of the form?
- ☐ Prepared a complete, separate, and independent Form GM for each RCRA hazardous waste generated on site from production processes or service activities?
- ☐ Prepared a complete, separate, and independent Form GM for each RCRA hazardous waste residual generated from the on-site treatment, disposal, or recycling of wastes?
- ☐ Reported all information on 1989 shipments of RCRA hazardous wastes off site in Section III of Form GM?
- ☐ Reported all 1989 receipts of RCRA hazardous waste from off site on Form WR?
- ☐ Prepared a complete, separate, and independent Form PS for each treatment, disposal, or recycling system or process that, during 1989, was existing, in the planning stage, or in the closure process? This requirement applies whether or not the treatment, disposal, or recycling system or process is subject to RCRA permitting requirements.
- ☐ Checked that "NA" is entered, as appropriate, for all items that do not apply to your site?
- ☐ Numbered every page in your submission consecutively so that both the individual page number and the total number of pages appear at the bottom of each page?
- ☐ Right justified all quantity entries?
- ☐ Signed the certification statement in Section V of Form IC?
- ☐ Made a copy of the 1989 Hazardous Waste Report to retain with your records?

WHICH FORMS TO COMPLETE

This report contains five forms:

Form IC All sites required to submit the 1989 Hazardous Waste Report must complete Form IC.

Form GM A site required to submit the 1989 Hazardous Waste Report must complete Form GM if it generated or shipped any quantity of RCRA hazardous waste during 1989.



A complete, separate, and independent Form GM must be submitted for each RCRA hazardous waste:

- generated on site during 1989 from production processes or service activities;
- shipped off site during 1989 that was received from off site and has not been recycled, blended, or otherwise treated on site; or,
- residual generated during 1989 from the on-site treatment, disposal, or recycling of wastes.

Form WR A site required to submit the 1989 Hazardous Waste Report must complete Form WR if, during 1989, it received RCRA hazardous waste from off site.

Form PS A site required to submit the 1989 Hazardous Waste Report must complete Form PS if, during 1989, it treated, disposed, or recycled (TDR) RCRA hazardous waste on site, whether or not the TDR units were subject to RCRA permitting. Hazardous waste storage is not to be reported on this form.

A separate and independent Form PS must be completed for each treatment, disposal, or recycling process system, RCRA permitted or RCRA exempt, that, during 1989, was existing, in the planning stage, or in the closure process.

Form OI Complete this form if your State requires it. Instructions for Form OI are on the back of the form.

HOW TO COMPLETE THE FORMS

Assistance Help Line

To obtain assistance in completing the forms in this package, please telephone the 1989 Hazardous Waste Report Help Line: (800) 876-0352. The help line operates Monday through Friday from 9:00 a.m. to 8:00 p.m. Eastern Standard Time.

Documents Helpful in Completing the Forms

In preparing the 1989 Hazardous Waste Report you will need to consult your records on quantities and types of hazardous waste generated. Some records that might be helpful are listed below. Your site may not have all of the documents.

- Copies of records of quantities of hazardous waste generated or accumulated
- Hazardous Waste Manifest forms
- Results of laboratory analysis of your wastes
- Contracts or agreements with off-site facilities that manage your wastes
- Copies of permits for on-site waste management systems
- If your site submitted it, the 1988 Toxic Chemical Release Inventory Form required under Title III, Section 313 of the Superfund Amendment and Reauthorization Act (SARA 313)

Site ID Labels

If you received preprinted site identification labels, attach one label to each form in the Report. If you did not receive labels in your package, enter the site name and its EPA Identification Number (EPA ID) on each form in the space provided for the label. Be sure that the site identification information is complete on each form before you make additional copies of the forms to complete your report.

Code Lists

Many of the codes required to complete this report have been changed from those used in previous Hazardous Waste Reports. Please use only the codes included in the instructions or lists of codes beginning on page 53. Within the text of the instructions, the page number of code lists are denoted by this symbol:



Skip Instructions

The text contains instructions that direct you to the next appropriate section or box to be completed. These boxed skip instructions are denoted by this symbol:



Don't Know or Not Applicable Responses

You are expected to complete every item on the forms using available data. However, you are not required to perform non-routine tests or measurements solely for the purpose of providing information for this report. On all forms enter a response of "don't know" as instructed if the information requested is not known or not available; enter a response of "not applicable" as instructed if the information requested is not applicable.

Right Justification of Quantities

All quantities reported on the forms should be right justified. For example, a quantity of 12,000 tons should be entered on the form as follows: 12,000

Comments Section on Forms

Use the Comments sections at the bottom of the forms to clarify or continue any entry. Reference the comment by entering the Section number and Box letter. For example, if a waste stream had five RCRA waste codes, enter the first four in Section I, Box B of Form GM, then enter the fifth waste code in the Comments with a notation of "Sec. I, Box B, continued: D001."

Photocopies of Forms

A copy of the forms is included in this package. Photocopy as many forms as are needed to complete your report. Make copies **after** you have attached the label or entered the site name and EPA ID but before you enter information on the form.

After you have completed your report you should photocopy the entire report for your records.

Page Numbering of Forms

When you have completed all the forms in the package, number the pages consecutively throughout so that both the individual page number and the total number of pages in your submission appear on the bottom of every page (e.g., Page 1 of 7, Page 2 of 7, etc.).

Example 1989 Hazardous Waste Report Forms for Hypothetical Sites

Appendix A describes three hypothetical hazardous waste sites and illustrates which forms each site must submit and how to complete them. The three sites are: a generator that ships all of its waste off site for management; a generator that ships some of its waste off site and manages the rest in an exempt process on site; and a commercial treatment, storage, disposal, or recycling facility.

Electronic Reporting

All of the 1989 Hazardous Waste Report may be submitted on electronic media. File specifications and instructions for tape or diskette submissions are provided in Appendix B.

Confidential Business Information

You may not withhold information from the Administrator of EPA because it is confidential. However, when the Administrator is requested to consider information confidential, he is required to treat it according to EPA regulations contained in Title 40 of the Code of Federal Regulations (CFR), Part 2, Subpart B.

These regulations provide that a business may, if it desires, assert a claim of business confidentiality (CBI) covering all or part of the information furnished to EPA. Section 2.203(b) explains how to assert a claim.

The Agency will treat information covered by such a claim in accordance with the procedures set forth in Subpart B. If someone requests release of information covered by a claim of confidentiality or if the Agency otherwise decides to make a determination as to whether such information is entitled to confidential treatment, EPA will notify the business. EPA will not disclose information as to when a claim of confidentiality has been made except to the extent of and in accordance with 40 CFR Part 2, Subpart B. However, if the business does not claim confidentiality when it furnishes information to EPA, EPA may make the information available to the public without notice to the business.

INSTRUCTIONS FOR COMPLETING

FORM IC - IDENTIFICATION AND CERTIFICATION

WHO MUST COMPLETE THIS FORM?

All sites required to submit the 1989 Hazardous Waste Report must complete Form IC.

PURPOSE OF THIS FORM

Form IC is divided into eight sections. Sections I through IV identify the site. Section V certifies that the information reported throughout is truthful, accurate, and complete. Sections VI and VII update the site's EPA notification of hazardous waste activities. Finally, Section VIII records information on waste minimization activities during 1988 and 1989.

HOW TO COMPLETE THIS FORM

You must complete all eight sections. Please print or type (12 pitch) all information. Throughout the form, enter "DK" if the information requested is not known or not available; enter "NA" if the information requested is not applicable. Use the Comments section at the end of the form to clarify or continue any entry. Preceding the comment, reference the section number and box letter to which it refers.

ITEM-BY-ITEM INSTRUCTIONS

Section I: Site Name and Location Address

Complete Boxes A through H. Check the box "Same as label" if the address information provided on a pre-printed label is correct. In Box C, check "Yes" or "No" to indicate whether the site/company name associated with this EPA ID has changed since 1987. The EPA ID is address specific and cannot be transferred to a new location.

Section II: Mailing Address of Site

Check "Yes" or "No" to indicate if the site's mailing address is the same as the location address listed in Section I. If you checked "No," enter the site's mailing address in Boxes B through E.

Section III: Contact Information

Enter the full name, title, and phone number of the person who should be contacted if questions arise regarding the information provided in the 1989 Hazardous Waste Report submitted by your site.

Section IV: SIC Code Information

Enter the Standard Industrial Classification (SIC) Code(s) that best describes the principal product or group of products produced or distributed or the services rendered at the site. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. A complete list of SIC Codes begins on page 53. SIC Codes are organized by major industrial sectors, listed below. Space is provided for four SIC Codes. If you do not require four codes, enter "NA" in the unused fields.

SIC Code Major Industrial Sector

Agriculture	page 53
Mining	page 53
Construction	page 53
Manufacturing	page 53 - 55
Transportation and Utilities	page 55 - 56
Wholesale Trade	page 56
Retail Trade	page 56
Finance, Insurance & Real Estate	page 56 - 57
Services	page 57
Public Administration	page 58
Nonclassifiable Establishments	page 58



SIC Codes, page 53.

Section V: Certification

Do not complete Section V until all forms required for submission are present, complete, and accurate. The 1989 EPA Hazardous Waste Report Submissions Checklist on page 3 is provided to assist you. After you have completed all required forms, enter the number of pages submitted for each form, your full name and title, and the date. Read the certification statement, and sign the form. Refer to page 3 of this booklet for mailing instructions.

Section VI: Generator Status

Complete Box A and follow the instructions to complete Box B or skip to Section VII.

Box A: 1989 generation

Check one box to indicate the site's RCRA hazardous waste generation status in 1989.

If your site did not generate RCRA hazardous waste during 1989, check "No" and proceed to Box B.

If your site did generate any RCRA hazardous waste during 1989, review the definitions of LQG, SQG, and CESQG below to determine your generator status and check the appropriate box.



Continue to Box B, if you checked "No."
Skip to Section VII if you check LQG, SQG, or CESQG

Section VI (Continued)

A site that generates solid waste must determine if that waste is a hazardous waste or if that waste is excluded from regulation under 40 CFR 261.4(b). Only if a waste is subject to RCRA regulation, or is not treated in an exempt treatment unit, is the quantity to be counted in determining the site's generator category. However, quantities of hazardous waste treated in exempt units must be reported by LQG's along with all other hazardous waste quantities. If a waste is excluded, or if it is regulated only by your State, its quantity need not be counted.

	Excluded Wastes, page 59.
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<u>Code</u>	<u>Generator Status</u>
-------------	-------------------------

- | | |
|---|--|
| 1 | No, this site did not generate RCRA hazardous waste during 1989. |
| 2 | <p><u>LQG: Large Quantity Generator</u>
 This site is a Large Quantity Generator if, in 1989, the site met any of the following criteria:</p> <ul style="list-style-type: none"> a) The site generated in any single month 1,000 kg (2,200 lbs) or more of RCRA hazardous waste; or b) The site generated in any single month, or accumulated at any time 1 kg (2.2 lbs) of RCRA acute hazardous waste; or c) The site generated or accumulated at any time more than 100 kg (220 lbs) of spill cleanup material contaminated with RCRA acute hazardous waste. |
| 3 | <p><u>SQG: Small Quantity Generator</u>
 This site is a Small Quantity Generator if, in 1989, it met all the following criteria:</p> <ul style="list-style-type: none"> a) In one or more months the site generated more than 100 kg (220 lbs) of hazardous waste, <u>but in no month did the site:</u> (1) generate 1000 kg (2200 lbs) or more of hazardous waste, or; (2) generate 1 kg (2.2 lbs) or more of acute hazardous waste, or; (3) generate 100 kg (220 lbs) or more of material from the cleanup of a spillage of acute hazardous waste. b) the site accumulated no more than 1 kg (2.2 lbs) of acute hazardous waste, and no more than 100 kg (220 lbs) of material from the cleanup of a spillage of acute hazardous wastes; and c) the site stored its wastes in tanks or containers in a manner consistent with regulatory provisions. |

(Codes continued on next page.)

Section VI (Continued)

4 CESQG: Conditionally Exempt Small Quantity Generator

This site's hazardous waste activities met the definition of a RCRA CESQG every month during 1989. A RCRA CESQG is defined by the following criteria:

- a) the site generated no more than 100 kg (220 lbs) of hazardous waste, **and** no more than 1 kg (2.2 lbs) of acute hazardous waste, **and** no more than 100 kg (220 lbs) of material from the cleanup of a spillage of acute hazardous wastes; **and**
- b) the site accumulated no more than 1,000 kg (2200 lbs) of hazardous waste, **and** no more than 1 kg (2.2 lbs) of acute hazardous waste, **and** no more than 100 kg (220 lbs) of material from the cleanup of a spillage of acute hazardous wastes; **and**
- c) the site treated or disposed of the hazardous wastes in a manner consistent with regulatory provisions (40 CFR 261.5(f)(3) and 261.5(g)(3)).

Box B: Reason

If your site did not generate RCRA hazardous waste during 1989, check as many boxes as necessary to explain the reason. The alternatives are:

<u>Code</u>	<u>Reason</u>
1	Never generated: This indicates that the site has never generated RCRA hazardous waste and did not do so during 1989.
2	Out of business: The site has gone out of business and did not generate hazardous waste at this location during 1989.
3	Only excluded or delisted waste: The site generated only wastes not subject to RCRA regulation during 1989. Wastes not subject to RCRA regulation are delisted wastes, excluded wastes, and wastes regulated only by your State government. A list of excluded wastes is provided on page 59.
4	Only non-hazardous waste: This site generates no wastes that are subject to RCRA regulation.
5	Periodic or occasional generator: This site generates hazardous waste only occasionally, and generated none during 1989.
6	Waste minimization activity: This site was previously a generator of hazardous waste, but did not generate any during the report year due to an effective waste minimization program. See the definition of Waste Minimization on page 52.
7	Other: This site has other reasons for not generating in 1989. Specify in the Comments section and reference Section VI, Box B.

Section VII: On-site Waste Management Status**Box A: Storage**

Did the site have any RCRA permitted storage on site during 1989? Select one code from the list below and record in the response space in Box A.

NOTE: RCRA Storage does not include short term accumulation exempt under the 90, 180, or 270 day rules. If the ONLY type of storage at your site was accumulation of wastes under these rules prior to shipment, answer "1-No RCRA permitted storage."

<u>Code</u>	<u>Explanation</u>
1	No RCRA permitted storage
2	RCRA permitted storage--TANKS
3	RCRA permitted storage--CONTAINERS
4	RCRA permitted storage--OTHER
5	RCRA permitted storage--COMBINATION
8	Don't know

Box B: RCRA treatment, recycling, or disposal

During 1989, was treatment, recycling, or disposal of hazardous wastes conducted on site in units requiring a RCRA permit? Select one code from the list below and record in the response space in Box B.

<u>Code</u>	<u>Explanation</u>
1	No, hazardous waste was not treated, recycled, or disposed on site during 1989 in a unit requiring a RCRA permit and the site does not plan to develop any on-site RCRA permitted treatment, recycling, or disposal capacity.
2	No, hazardous waste was not treated, recycled, or disposed on site during 1989 in a unit requiring a RCRA permit but the site does plan to develop on-site RCRA permitted treatment, recycling, or disposal capacity.
3	Yes, hazardous waste was treated, recycled, or disposed on site during 1989 in a unit requiring a RCRA permit.

Section VII (Continued)

Box C: RCRA-exempt treatment, recycling, or disposal

During 1989, was treatment, recycling, or disposal of hazardous wastes conducted on site in units exempt from RCRA permitting requirements? Select one code from the list below and record in the response space in Box C.

<u>Code</u>	<u>Explanation</u>
1	No, hazardous waste was not treated, recycled, or disposed on site during 1989 in a unit exempt from RCRA permitting requirements and the site does not plan to develop any on-site RCRA-exempt treatment, recycling, or disposal capacity.
2	No, hazardous waste was not treated, recycled, or disposed on site during 1989 in a unit exempt from RCRA permitting requirements but the site does plan to develop on-site RCRA-exempt treatment, recycling, or disposal capacity.
3	Yes, hazardous waste was treated, recycled, or disposed on site during 1989 in a unit exempt from RCRA permitting requirements.

Section VIII: Waste Minimization Activity During 1988 or 1989

Waste minimization means the reduction, to the extent feasible, of hazardous waste that is generated or subsequently treated, stored, or disposed. Waste minimization includes any source reduction or recycling activity undertaken by a generator that results in: (1) the reduction of total volume or quantity of hazardous waste; (2) the reduction of toxicity of hazardous waste; or (3) both, as long as the reduction is consistent with the goal of minimizing present and future threats to human health and the environment.

Box A: Did this site begin or expand a source reduction activity during 1988 or 1989?

Source reduction means the reduction or elimination of waste at the source, usually within a process. Source reduction measures include process modifications, feedstock substitutions, improvements in feedstock purity, housekeeping and management practices, increases in the efficiency of machinery, and recycling within a process. Source reduction implies any action that reduces the toxicity or the amount of waste exiting a process.

Check "Yes" or "No" in Box A.

Section VIII (Continued)

Box B: Did this site begin or expand a recycling activity during 1988 or 1989?

Recycling means the use or reuse of waste as an effective substitute for a commercial product, or as an ingredient or feedstock in an industrial process. It also refers to the reclamation of useful constituent fractions within a waste material or removal of contaminants from a waste to allow it to be reused. As used in this report, recycling implies use, reuse, or reclamation of a waste, either on site or off site, after it has been generated.

Check "Yes" or "No" in Box B.

Box C: Did this site conduct a source reduction or recycling opportunity assessment during 1988 or 1989?

Opportunity Assessment is a procedure that identifies practices that can be implemented to reduce the generation of hazardous waste or the quantity that must subsequently be treated, stored, or disposed.

Check "Yes" or "No" in Box C.

Box D: What factors have limited this site from initiating new source reduction activities during 1988 or 1989?

Check as many boxes as are applicable to your site.

Box E: What factors have limited this site from initiating new on-site or off-site recycling activities during 1988 or 1989?

Check as many boxes as are applicable to your site.

INSTRUCTIONS FOR COMPLETING

FORM GM - WASTE GENERATION AND MANAGEMENT

WHO MUST COMPLETE THIS FORM?

A site required to submit the 1989 Hazardous Waste Report must complete Form GM if the site generated or shipped any quantity of RCRA hazardous waste during 1989.

A complete, separate, and independent Form GM must be submitted for each RCRA hazardous waste:

- generated on site during 1989 from production processes or service activities;
 - shipped off site during 1989, that was received from off site and not recycled, blended, or otherwise treated on site; or,
 - residual generated during 1989 from the on-site treatment, disposal, or recycling of hazardous wastes.
-

PURPOSE OF THIS FORM

Form GM is divided into four sections that together document: the source, characteristics, and quantity of hazardous waste generated on site; the quantity of hazardous waste managed on site and the management methods; the quantity of hazardous waste shipped off site and the off-site management methods; and the waste minimization activities related to the hazardous waste stream.

HOW TO COMPLETE THIS FORM

Make and complete a photocopy of Form GM for each hazardous waste that was generated on site; treated, recycled, or disposed on site; or shipped off site during 1989. Throughout the form, enter the specified code for "don't know" if the information requested is not known or not available; enter "NA" if the information requested is not applicable. Use the Comments section at the bottom of the form to clarify or continue any entry. Reference the comment by entering the section number and box letter.

WASTES TO BE REPORTED

All RCRA hazardous wastes generated on site need to be reported including those generated from production processes, from the treatment of nonhazardous waste, and hazardous waste residuals generated from the management of a hazardous waste.

NOTE: RCRA HAZARDOUS WASTES TREATED IN EXEMPT UNITS ARE TO BE REPORTED ON THIS FORM.

Example 1:

A plant's on-site degreasing operations generate a hazardous waste solvent (F001), and the plant therefore completes a Form GM for this waste stream. The plant manages this stream by recovering solvents through a batch distillation system. The still bottoms

8/4
1997

generated as residuals from batch distillation are, by the "derived from" rule, RCRA hazardous waste (F001).

- Complete Form GM for hazardous waste solvent, F001
- Complete a separate Form GM for still bottoms, F001

Example 2:

A pretreatment operation for nonhazardous wastewaters generates a sludge that fails the EP Toxic test for metals. A Form GM is required for the sludge, but not for the nonhazardous wastewaters entering the pretreatment process.

- Complete Form GM for the sludge
- Do not complete Form GM for the nonhazardous wastewaters

Example 3:

Rinse waters from an electroplating operation contain chromium above the characteristic limit and are therefore reported on a Form GM as D007. They are treated in an on-site wastewater treatment system that generates a RCRA hazardous wastewater treatment sludge (F006); this sludge must be reported on a separate Form GM as a residual from hazardous waste management.

- Complete Form GM for rinse waters, D007
- Complete a separate Form GM for the RCRA hazardous wastewater treatment sludge, F006

Section I

Section I requests information on each hazardous waste generated on site; treated, recycled or disposed on site; or shipped off site during 1989.

Box A: Waste Description

Provide a short narrative description of the waste, citing:

- General type;
- Source;
- Type of hazard; and
- Generic chemical name or primary hazardous constituents.

In the example below, note that the general type (spent solvent), source (degreasing operation in tool production), type of hazard (ignitability), and generic chemical names (mineral spirits and kerosene) have all been cited.

Example:

"Ignitable spent solvent from degreasing operation in tool production; mixture of mineral spirits and kerosene."

Box B: EPA Hazardous Waste Code

Enter the EPA Hazardous Waste Code(s) that applies to the waste reported in Box A. EPA Hazardous Waste Codes are listed beginning on page 61. If you need space for additional codes, use the Comments section to continue and reference the comment by entering Section Number I and Box Letter B. If fewer than four codes are applicable, enter "NA" in the remaining fields. If the waste is regulated only by the State, enter "NA" in all fields.



EPA Hazardous Waste Codes, page 61.

Section I (Continued)**Box C: State Hazardous Waste Code**

Complete this box if your State requires it. Otherwise, leave this box blank. If you need space for additional codes, use the Comments section to continue and reference Section I, Box C.

Box D: SIC Code

Enter the 4-digit Standard Industrial Classification (SIC) Code for the product or service associated with generation of the waste.



SIC Codes, page 53.

Box E: Source Code

Enter the Source Code that best describes the production, service, or waste management process that was the source associated with generation of the waste.



Source Codes, page 78.

Box F: Form Code

Review the Form Codes on page 80 and enter the code that best corresponds to the physical/chemical state of the hazardous waste reported in Box A.



Form Codes, page 80.

Box G: Origin and System Type

Review the origin codes below. Enter the code that best describes the process or activity that was the source of the hazardous waste reported in Box A. If the waste stream being reported is a residual, the system type that generated the residual should be reported in the space provided.

<u>Code</u>	<u>Origin</u>
-------------	---------------

- | | |
|---|---|
| 1 | The hazardous waste was generated on site from the production process, service activity, or management of nonhazardous waste. |
| 2 | The hazardous waste was received from off site and has not been recycled, blended, or otherwise treated on site. |
| 3 | The hazardous waste was a residual from the on-site treatment or recycling of previously existing hazardous waste. |

If you enter code 3, you must also enter the System Type that best describes the operation from which the waste is a residual. If you enter code 1 or 2, enter "NA" in system type.



System Type Codes, page 83.

Example:

The hazardous waste is incinerator ash generated as a result of on-site thermal treatment in a fixed hearth, of a hazardous waste sludge.

The Origin Code is 3. The System Type is M042.

Section I (Continued)**Box H: TRI Constituent**

Review the codes listed below and enter the code that best describes the relationship of the waste stream and the facility's requirement to submit the Toxic Chemical Release Inventory (TRI) Reporting Form in 1988 (Form R).

Code	TRI Reporting Note
1	The facility was not required to file a TRI report.
2	The facility was required to file a TRI report but the waste described in Section I contains no TRI constituents for which a Form R was completed.
3	The facility was required to file a TRI report and the waste described in Section I contains one or more TRI constituents for which a Form R was completed.
8	Don't know



Skip to Section II if you entered code 1, 2, or 8.
Continue to Box I if you entered code 3.

Box I: CAS Numbers

Complete Box I only if you entered code 3 in Box H. Enter the Chemical Abstract System (CAS) numbers, exactly as they appear on your 1988 Form R submission, for as many as five TRI constituents present in the waste. List the CAS numbers representing the TRI constituents in descending order of concentration. (The CAS number representing the TRI constituent of highest concentration would be placed in Box I, 1., the CAS number representing the second most concentrated TRI constituent in the waste would be placed in Box I, 2., and so on up to five TRI constituents, if applicable.) If fewer than five TRI constituents are present, enter "NA" in the remaining fields. If there is no CAS number for the TRI constituents, write the chemical category in the Comments section and reference Sec. I, Box I.

Section II

Section II requests information on the quantities of hazardous waste generated during 1988 and 1989.

Box A: Quantity Generated in 1988

Enter the total quantity of the hazardous waste that was generated during 1988. If the waste was not generated in 1988, enter "NA." Right justify the quantity entry. The unit of measure (UOM) will be reported in Box C.

Box B: Quantity Generated in 1989

Enter the total quantity of the hazardous waste that was generated during 1989. Right justify the quantity entry. The unit of measure (UOM) will be reported in Box C.

Section II (Continued)**Box C: UOM**

Enter the UOM (unit of measure) Code for the quantity generated reported in Boxes A and B. Quantities must be reported in one of the units of measure listed below. If a volumetric measure (gallons, liters or cubic yards) is selected, the density of the waste must be reported in Box D.

<u>Code</u>	<u>Unit of Measure</u>
1	Pounds
2	Short tons (2,000 pounds)
3	Kilograms
4	Metric tonnes (1,000 kilograms)
5	Gallons
6	Liters
7	Cubic yards



Skip to Box E if you entered code 1, 2, 3, or 4.
Continue to Box D if you entered code 5, 6, or 7.

Box D: Density

Complete Box D only if you entered code 5, 6, or 7 in Box C. Provide the density in either pounds per gallon (lbs/gal) or specific gravity (sg) and check the appropriate box. If density is unknown, enter "DK" in the density field.

Box E: Was This Waste Treated, Disposed, or Recycled On-site or Discharged to a Sewer/POTW?

Check "Yes" or "No" to indicate whether the waste was treated, disposed, or recycled on site or discharged to a sewer/POTW. If this question is answered "Yes," the following boxes must be completed.



Skip to Section III if you checked "No".
Continue to System 1 if you checked "Yes".

System 1 and System 2**System Type**

Enter the system type (from page 83) that this waste stream enters. Space is provided to report the on-site treatment, disposal, discharge, and/or recycling of the waste by as many as two different system types. The space provided for the second on-site system should be used only in the special case of the management of the same waste stream on site by more than one system during 1989. The extra space should not be used to report the on-site management of the treatment residual generated from management of the waste by the first system type. If more than two systems manage the same waste on site, you need not complete the entire form again. Simply attach a second copy of Form GM leaving blank all entries except Section II, System Type. Note in the Comments section of each page "Sec. II, System type continued on supplemental page." If you do not have a second system, enter "NA" in the first field of System 2.

Example:

A firm generates 100 tons of F002 solvent waste. Eighty (80) tons are recycled for reuse in a batch distillation system generating 5 tons of still bottoms. The remaining 20 tons were burned in an industrial boiler.

Section II (Continued)

System 1 would be a distillation system (M021) with a quantity of 80 tons. System 2 would be an energy recovery - liquids (M051) with a quantity of 20 tons. **NOTE:** The 5 tons of still bottoms should be reported on a separate Form GM.

Quantity Treated, Disposed, or Recycled

Enter the quantity of hazardous waste described in Section I that was treated, disposed, discharged, or recycled on site during 1989. Report the quantity in the same unit of measure reported in Section II, Box C.



System Type Codes, page 83.

Section III

This section requests information on off-site shipment of hazardous waste. Information requested includes the EPA Identification Number of the facility to which the waste was shipped, the System Type in which the waste was managed at that facility, and the total quantity of the waste shipped during the report year. Report the quantity in the same unit of measure as Section II, Box C.

Space is provided to report shipments of the waste to two different facilities. If the waste was shipped to only one facility during 1989, enter "NA" in the EPA Identification field for Site 2 and leave the rest of the row blank. If the waste you reported in Section I was shipped to more than two facilities during 1989, you need not complete the entire form again. Simply attach a second copy of Form GM leaving blank all entries except Section III, Boxes B, C, and D. Note in the Comments section of each page "Sec. III, Box B continued on supplemental page."

Box A: Was the Waste Shipped Off Site?

Check "Yes" or "No" to indicate if any of the waste described in Section I was shipped off site during 1989.



Continue to Box B if you checked "Yes".
Skip to Section IV if you checked "No".

Box B: EPA ID No. of Facility to Which Waste Shipped

Enter the 12-digit EPA Identification Number (EPA ID No.) of the facility to which the waste was shipped. If the facility does not have an EPA ID Number, enter "NA" and note the reason in the Comments section. Reference Section III, Box B.

Box C: System Type

Enter the system type code for the off-site management of this waste stream.

Review the System Type codes that begin on page 83. Enter the one code that best describes the way in which the waste was managed during 1989.



System Type Codes, page 83.

Box D: Total Quantity Shipped

Enter the total quantity of the waste shipped to the facility during 1989. The quantity must be reported in the unit of measure entered in Section III, Box C. Shipment quantities should equal the total quantity recorded on Uniform Hazardous Waste Manifests for this site during 1989, unless there were rejections or other complications.

Section IV

Section IV requests information on any new activities undertaken during the report year that **resulted** in waste minimization. Detailed definitions of waste minimization and its component parts, source reduction and recycling, are provided below.

Source reduction means the reduction or elimination of hazardous waste at the source, usually within a process. Source reduction measures include process modifications, feedstock substitutions, improvements in feedstock purity, housekeeping and management practices, increases in the efficiency of machinery, and recycling within a process. Source reduction implies any action that reduces the toxicity or the amount of waste exiting a process.

Recycling means the use or reuse of waste as an effective substitute for a commercial product, or as an ingredient or feedstock in an industrial process. It also refers to the reclamation of useful constituent fractions within a waste material or the removal of contaminants from a waste to allow it to be reused. As used in this report, recycling implies use, reuse, or reclamation of a waste, either on site or off site, after it has been generated.

Waste minimization means the reduction, to the extent feasible, of waste that is generated or subsequently treated, stored, or disposed. Waste minimization includes any source reduction or recycling activity undertaken by a generator that results in: (1) the reduction of total volume or quantity of hazardous waste; (2) the reduction of toxicity of hazardous waste; or (3) both, as long as the reduction is consistent with the goal of minimizing present and future threats to human health and the environment.

Box A: Waste Minimization Results

During 1989, did you implement any new activities that resulted in minimization of the waste described in Section I, Box A?

In the past, sites have reported activities not meeting this definition. The following are examples of activities that should not be reported here as waste minimization:

- Sending waste off site for management (other than recycling)
- Incineration or other thermal treatment
- Treatment to reduce volume (after the waste exits the process in which it was generated)
- Treatment to reduce toxicity (after the waste exits the process in which it was generated)
- Bankruptcy
- Installation of filter press to reduce water content and volume
- Installation of equipment to comply with Clean Water Act
- Delisting of a hazardous waste
- Energy recovery (e.g., burning in boilers)



**Continue with Box B if you checked "Yes".
This form is complete if you checked "No".**

Section IV (Continued)**Box B: Activity**

What activities were implemented in 1989 to achieve the waste minimization results for the waste described in Section I?

Review the list on page 85 and select the codes representing activities undertaken for this waste. Response spaces are provided for up to four activities. If more than four codes are required, continue the entry in Comments, referencing Section IV, Box B. If fewer than four codes are applicable enter "NA" in the remaining fields. See definitions of waste minimization, source reduction, and recycling on page 20.



Activity Codes, page 85.

Box C: Other Effects

Check "Yes" if the activities that resulted in minimization of the waste either:

- Increased the toxicity of the waste; or
- Increased the quantity or toxicity of emissions into air, water, or land.

Box D: Quantity Recycled in 1989 Due to New Activities

Enter the quantity of hazardous waste that was recycled during 1989 because of new recycling activities. Count both on-site and off-site recycling, but do not include quantities recycled in recycling systems operational before 1989. Do not include closed-loop recycling as that is to be reported as a source reduction activity. Enter "NA" if no hazardous waste was recycled because of new recycling activities.

Box E: Activity/Production Index

The activity/production index is a measure of changes in economic and other factors that affect the quantity of hazardous waste generated in 1989, compared to 1988. The index is used to distinguish inter-year quantity changes that resulted from waste minimization activity from those that are attributable to economic or other factors.

EPA understands that some sites may find it impractical or impossible to calculate a meaningful activity/production index. If it is impossible to calculate an activity/production index for your site, enter "NA" in Box E.

Use the worksheet on page 22 to calculate the activity/production index. Determine the most appropriate measure of production or activity, using product manufactured, raw materials used, number of hours the plant was in operation, the total number of employee hours worked, sales, budget, or any other factor that is appropriate for the waste stream. Divide the value of that measure for 1989 by the comparable value for 1988.

Example 1:

If the firm manufactures tools using a process which generated a hazardous waste, the activity/production index would indicate the change in the number of tools produced in 1989 compared to the preceding year, 1988.

1,200 tools were produced in 1989 and 1,000 tools were produced in 1988. The activity/production index would equal 1,200 divided by 1,000.

$$\frac{\text{(1989 production)}}{\text{(1988 production)}} = \frac{1,200}{1,000} = 1.2 \text{ (activity/production index)}$$

The number "1.2" would be entered in Box E.

Section IV (Continued)**Example 2:**

If a firm that manufactures stainless steel food containers is losing market share to competitors making plastic containers, its production might have declined between 1988 and 1989.

88,000 containers were produced in 1989 and 110,000 containers were produced in 1988. The activity/production index would equal 88,000 divided by 110,000.

$$\frac{\text{(1989 production)}}{\text{(1988 production)}} = \frac{88,000}{110,000} = 0.8 \text{ (activity/production index)}$$

The number "0.8" would be entered in Box E.

Example 3:

If a firm is a dry cleaner that cleaned 2,200 garments in 1989 and 2,000 garments in 1988, the activity/production index would indicate the change in the number of garments cleaned. The activity/production index would equal 2,200 divided by 2,000.

$$\frac{\text{(1989 production)}}{\text{(1988 production)}} = \frac{2,200}{2,000} = 1.1 \text{ (activity/production index)}$$

The number "1.1" would be entered in Box E.

Activity/Production Index Worksheet

Units produced or units of service provided in 1989	(_____)
divided by	—
Units produced or units of service provided in 1988	(_____)
Enter activity/production index in Box E	= __ _ . _

Box F: Source Reduction Quantity

If you reported a source reduction activity in Box B (codes W01 through W99), enter your best estimate of the reduction in 1989 quantity generated that resulted from the source reduction activities. Report the quantity in the unit of measure reported in Section II, Box C. Enter "NA" in this field if:

- You did not report a source reduction activity; or
- The source reduction activity you reported resulted only in a reduction in toxicity and not a reduction in quantity of waste.

If you have completed Section II, Boxes A and B, and Section IV, Box E, you can calculate "Source Reduction Quantity" using the method described below.

Section IV (Continued)

If you do not know the information requested in Section II, Boxes A and B, and Section IV, Box E, you may estimate the quantity of hazardous waste prevented in 1989 using another method. Review the three examples that follow to consider which approach your site might utilize. However, if you do not use this method, you must describe your computation in the Comments section at the end of the form. Reference Section IV, Box F. A blank Source Reduction Quantity Worksheet is included on page 26.

Example 1:

A firm manufactures tools using a process that generates hazardous waste. In 1988, 1,000 tools were produced and 2,000 gallons of waste were generated. In 1989, 1,200 tools were produced and 1,800 gallons of waste were generated. The activity/production index for the firm is 1.2. In 1989, the firm introduced a new process to minimize the quantity of hazardous waste it generated.

$$\frac{(\text{1989 production})}{(\text{1988 production})} = \frac{1,200}{1,000} = 1.2 \text{ (activity/production index)}$$

Source Reduction Quantity Worksheet

Step 1: Multiply the quantity generated in 1988 by the activity/production index.

$$\begin{array}{rcl} & \underline{2,000} & \text{Quantity generated in 1988 (from Sec. II, Box A)} \\ \times & \underline{1.2} & \text{Times activity/production index (from Sec. IV, Box E)} \\ = & \underline{2,400} & \text{Equals quantity that would have been generated} \\ & & \text{without source reduction} \end{array}$$

Step 2: Subtract the 1989 quantity (Sec. II, Box B) from the quantity generated without the waste minimization project or activity (step 1 above).

$$\begin{array}{rcl} & \underline{2,400} & \text{Quantity without source reduction} \\ - & \underline{1,800} & \text{Minus quantity generated in 1989 (from Sec. II, Box A)} \\ = & \underline{600} & \text{Equals quantity of generation prevented by source} \\ & & \text{reduction (enter in Box F)} \end{array}$$

Step 3: Enter source reduction quantity in Box F.

Sec. II	A. Quantity generated in 1988 Instruction Page 17 <div>1 2 0 0 0 0</div>	B. Quantity generated in 1989 Page 17 <div>1 8 0 0</div>	C. UOM Page 18 <div>5</div>	D. Density Page 18 <div>18.34</div> <input checked="" type="checkbox"/> 1 lbs/gal <input type="checkbox"/> 2 sg	E. Was this waste treated, disposed or recycled on site? Page 18 <input type="checkbox"/> 1 Yes (CONTINUE) <input checked="" type="checkbox"/> 2 No (SKIP TO SEC. III)
Sec. IV	A. Waste minimization results in 1989 Instruction Page 20 <input checked="" type="checkbox"/> 1 Yes (CONTINUE TO BOX B) <input type="checkbox"/> 2 No (THIS FORM IS COMPLETE)				
	B. Activity Page 21 <div>1512</div>	C. Other effects Page 21 <input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No	D. Quantity recycled in 1989 due to new activities Page 21 <div>N/A</div>	E. Activity/Production Index Page 21 <div>1.2</div>	F. Source Reduction Quantity Page 22 <div>600</div>

Section IV (Continued)**Example 2:**

A firm manufactures tools using a process that generates hazardous waste. In 1988 the firm produced 2,000 tools, generating 3,000 gallons of hazardous waste in the process. In 1989, the firm produced 1,400 tools, and 2,000 gallons of waste. The activity/production index for the firm is 0.7. In 1989, the firm, wishing to reduce costs for waste management, introduced a new process to minimize the quantity of hazardous waste it generated. The firm calculated its waste minimization results as follows.

$$\frac{\text{(1989 production)}}{\text{(1988 production)}} = \frac{1,400}{2,000} = 0.7 \text{ (activity/production index)}$$

Source Reduction Quantity Worksheet

Step 1: Multiply the quantity generated in 1988 by the activity/production index.

$$\begin{array}{rcl} & \underline{3,000} & \text{Quantity generated in 1988 (from Sec. II, Box B)} \\ \times & \underline{0.7} & \text{Times activity/production index (from Sec. IV, Box E)} \\ \hline = & \underline{2,100} & \text{Equals quantity that would have been generated} \\ & & \text{without source reduction} \end{array}$$

Step 2: Subtract the 1989 quantity (Sec. II, Box B) from the quantity generated without the waste minimization project or activity (step 1 above).

$$\begin{array}{rcl} & \underline{2,100} & \text{Quantity without source reduction} \\ - & \underline{2,000} & \text{Minus quantity generated in 1989 (from Sec. II, Box B)} \\ \hline = & \underline{100} & \text{Equals quantity of generation prevented by source} \\ & & \text{reduction (enter in Sec. IV, Box F)} \end{array}$$

Step 3: Enter source reduction quantity in Box F.

Sec. II	A. Quantity generated in 1988 Instruction Page 17	B. Quantity generated in 1989 Page 17	C. UOM Page 18	D. Density Page 18	E. Was this waste treated, disposed or recycled on site? Page 18
	1 3 0 0 0 0	2 0 0 0 0	15	18 . 3 4 <input checked="" type="checkbox"/> 1 lbs/gal <input type="checkbox"/> 2 sg	<input type="checkbox"/> 1 Yes (CONTINUE) <input checked="" type="checkbox"/> 2 No (SKIP TO SEC. III)

Sec. IV	A. Waste minimization results in 1989 Instruction Page 20		<input checked="" type="checkbox"/> 1 Yes (CONTINUE TO BOX B) <input type="checkbox"/> 2 No (THIS FORM IS COMPLETE)			
	B. Activity Page 21	C. Other effects Page 21	D. Quantity recycled in 1989 due to new activities Page 21	E. Activity/Production Index Page 21	F. Source Reduction Quantity Page 22	
	1 5 2 1 5 4 1 N A 1 N A	<input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No	1 N A	1 0 . 1 7	1 0 0	

Section IV (Continued)Example 3:

A firm uses a solvent bath to clean continuous filament wire in a batch process. Since the firm has no record of how much wire passes through the bath before the solvent is changed, the activity/production index is "NA". The firm does have a record of the number of times the solvent is changed in the year. To reduce the amount of waste exiting the process, in 1989 the firm replaced the original bath container with a new container that holds 20 gallons less solvent per changing.

The quantity of waste generated from the solvent bath in 1988, before the container was replaced, was 2,000 gallons. Note that this number was known through a recordkeeping system that tracked waste generation by process.

The number of times the bath was changed was 10, generating 200 gallons of hazardous waste per changing. This number was known through the firm's recordkeeping system.

Using the new container, changing the bath 10 times in 1989, the firm generated only 180 gallons of waste per changing. Thus, the total quantity of waste generated from the solvent bath in 1989 was 1,800 gallons.

By replacing the bath container the firm prevented 200 gallons (Sec. II, Box A minus Box B quantities) of hazardous waste from being generated. (Entered in Sec. IV, Box F, source reduction quantity.)

Sec. II	A. Quantity generated in 1988 Instruction Page 17 1 2 0 0 0 0	B. Quantity generated in 1989 Page 17 1 8 0 0 0	C. UOM Page 18 5	D. Density Page 18 18 . 34 <input checked="" type="checkbox"/> 1 lbs/gal <input type="checkbox"/> 2 kg	E. Was this waste treated, disposed or recycled on site? Page 18 <input type="checkbox"/> 1 Yes (CONTINUE) <input checked="" type="checkbox"/> 2 No (SKIP TO SEC. III)
---------	---	---	------------------------	---	---

Sec. IV	A. Waste minimization results in 1989 Instruction Page 20 <input checked="" type="checkbox"/> 1 Yes (CONTINUE TO BOX B) <input type="checkbox"/> 2 No (THIS FORM IS COMPLETE)		B. Activity Page 21 W 5 2 W N A	C. Other effects Page 21 <input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No	D. Quantity recycled in 1989 due to new activities Page 21 N A	E. Activity/Production Index Page 21 N A .	F. Source Reduction Quantity Page 22 1 2 0 0 0
---------	--	--	---------------------------------------	---	--	--	--

The firm would complete the Comments Section as follows:

Comments:

Section IV Box F: Quantity prevented calculated by comparing volume of solvent bath in original container to the volume using new container which holds 20 gallons less.

Source Reduction Quantity Worksheet

Step 1: Multiply the quantity generated in 1988 by the activity/production index.

$$\begin{array}{rcl} & ______ & \text{Quantity generated in 1988 (from Sec. II, Box B)} \\ \times & ______ & \text{Times activity/production index (from Sec. IV, Box E)} \\ = & ______ & \text{Equals quantity that would have been generated without} \\ & & \text{source reduction} \end{array}$$

Step 2: Subtract the 1989 quantity (Sec. II, Box B) from the quantity generated without the waste minimization project or activity (step 1 above).

$$\begin{array}{rcl} & ______ & \text{Quantity without source reduction} \\ - & ______ & \text{Minus quantity generated in 1989 (from Sec. II, Box B)} \\ = & ______ & \text{Equals quantity of generation prevented by source} \\ & & \text{reduction (enter in Sec. IV, Box F)} \end{array}$$

Step 3: Enter source reduction quantity in Box F.

INSTRUCTIONS FOR COMPLETING

FORM WR - WASTE RECEIVED FROM OFF SITE

WHO MUST COMPLETE THIS FORM?

A site required to submit the 1989 Hazardous Waste Report must complete this form if, during 1989, the site received RCRA hazardous waste from off site.

PURPOSE OF THIS FORM

Form WR is divided into three parts labeled Waste 1, Waste 2, and Waste 3 that collect information about the quantities and characteristics of each hazardous waste received from an off-site source during 1989.

HOW TO COMPLETE THIS FORM

You may report waste from more than one off-site source on the same page of the form, but if your site received more than three hazardous wastes during 1989, photocopy and complete additional copies of this form. Throughout this form enter "DK" if the information requested is not known or is not available; enter "NA" if the information requested is not applicable. Use the Comments section at the bottom of the form to clarify or continue any entry. Reference the comment by entering the waste number and box letter.

ITEM-BY-ITEM INSTRUCTIONS

Box A: Description of Hazardous Waste

Provide a short narrative description of the waste, citing:

- General type;
- Source;
- Type of hazard; and
- Generic chemical name or primary hazardous constituents.

In the example below, note that the general type (spent solvent), source (degreaser in tool production), type of hazard (ignitability), and generic chemical names (mineral spirits and kerosene) have all been cited.

Example:

"Ignitable spent solvent used as a degreaser in tool production; mixture of mineral spirits and kerosene."

Box B: EPA Hazardous Waste Code

Enter the EPA Hazardous Waste Code(s) that applies to the waste reported in Box A. If you need space for additional codes, use the Comments section to continue and reference the comment by entering the waste number and box letter. If fewer than four codes are applicable, enter "NA" in the remaining fields. If the waste is regulated only by the State, enter "NA" and complete Box C.



EPA Hazardous Waste Codes page 61.

Box C: State Hazardous Waste Code

Complete this box only if your State requires it. Otherwise, leave this box blank. If you need space for additional codes, use the Comments section to continue and reference the waste number and Box C.

Box D: Off-Site Source EPA ID No.

Enter the 12-digit EPA Identification Number (EPA ID) of the off-site source from which the waste was received. If the site does not have an EPA ID number, enter "NA" in the space provided and note the reason in the Comments section. Reference the comment by noting the waste number and Box D. In Waste 2, check the box to indicate the same EPA ID as reported in Waste 1; in Waste 3, check the box to indicate the same EPA ID as reported in Waste 2.

Box E: 1989 Quantity Received

Report the total quantity of the hazardous waste (reported in Box A) that was received from the off-site source (reported in Box D) during 1989. If more than one shipment of the waste was received from the source, add the quantities and report only the sum.

Box F: UOM

Enter the UOM (unit of measure) Code for the quantity received reported in Box E. Quantities must be reported in one of the units of measure listed below. If a volumetric measure (gallons, liters, or cubic yards) is selected, the density of the waste must be reported in Box G.

<u>Code</u>	<u>Unit of Measure</u>
1	Pounds
2	Short tons (2,000 pounds)
3	Kilograms
4	Metric tonnes (1,000 kilograms)
5	Gallons
6	Liters
7	Cubic yards



Skip to Box H if you entered code 1, 2, 3, or 4.
Continue to Box G if you entered code 5, 6, or 7.

Box G: Density

Complete Box G only if you entered code 5, 6, or 7 in Box F. Provide the density in either pounds per gallon (lbs/gal) or specific gravity (sg) and check the appropriate box. If density is unknown, enter "DK" in the density field.

Box H: Form Code

Review the Form Codes on page 80 and enter the code that best corresponds to the physical/chemical state of the hazardous waste reported in Box A.



Form Codes, page 80.

Box I: System Type Code

Review the System Type codes found on page 83. Enter the one code that best describes the treatment, disposal, or recycling system the waste first entered during 1989.



System Type Codes, page 83.

INSTRUCTIONS FOR COMPLETING

FORM PS - WASTE TREATMENT, DISPOSAL, OR RECYCLING PROCESS SYSTEM

WHO MUST COMPLETE THIS FORM?

Sites required to submit the 1989 Hazardous Waste Report must complete this form if, during 1989, they treated, disposed, or recycled (TDR) RCRA hazardous waste on site, whether or not the TDR units were subject to RCRA permitting. Hazardous waste storage is not to be reported on this form.

A separate and independent Form PS must be completed for each treatment, disposal, or recycling process system, RCRA permitted or RCRA exempt, that, during 1989, was existing, in the planning stage, or in the closure process.

PURPOSE OF THIS FORM

Form PS is divided into three sections that together document the type, utilization, capacity, and planned changes in capacity of a hazardous waste treatment, disposal or recycling (TDR) system existing, permitted, under construction during 1989, or planned to be operational in the future.

HOW TO COMPLETE THIS FORM

Make and complete a photocopy of Form PS for each TDR system. Throughout the form, enter "DK" if the information requested is not known or not available; enter "NA" if the information requested is not applicable. Use the Comments section at the bottom of the form to clarify or continue any entry. Reference the comment by entering the section number and box letter.

To prepare for completing Form PS:

- (1) Read the section below "WHAT IS A TDR SYSTEM?" to learn the definition of a TDR system used for reporting on Form PS;
- (2) Read the section below "IDENTIFICATION OF A TDR SYSTEM" to determine, based on this definition, the types and number of TDR systems you must report for this site.

To complete Form PS:

- (1) Follow the item-by-item instructions beginning on page 36. Pay special attention to instructions regarding influents and capacities of multiple process systems, and systems that share units or processes with other systems, to avoid over-reporting; and,
- (2) Refer to the rules and examples for identification of TDR systems beginning on page 31.

WHAT IS A TDR SYSTEM?

A TDR system is one or more processes used together to treat, recycle, or dispose of a hazardous waste stream. A process is defined as one or more units acting together to perform a single operation on a hazardous waste stream. A unit is a single piece of equipment -- e.g., one tank, one distillation column, or one surface impoundment -- in which hazardous waste is treated, recycled, or disposed.

IDENTIFICATION OF A TDR SYSTEM

For purposes of reporting capacity data, a hazardous waste treatment, recycling, or disposal system is identified by each hazardous waste entry point into a process or sequence of processes. The system begins at the process unit where the hazardous waste stream(s) first enters and consists of all other treatment, recycling, or disposal process units downstream from the point of entry except for the following process units:

- Incineration/thermal treatment;
- Underground injection;
- Landfills;
- Land treatment/application/farming;
- Ocean disposal;
- Surface impoundment to be closed as landfill; and
- Other disposal.

Each of the above processes is always to be identified as a separate system and reported separately on its own Form PS. Storage is not to be reported on this form.

For incineration and reuse as fuel (energy recovery) systems, the capability to burn different physical forms of waste (i.e., liquids, sludges, solids) should be used to identify systems with each physical form being reported separately on different PS forms. For example, a rotary kiln incinerator capable of burning liquid, sludge, and solid wastes should be reported as three separate systems, one for each different physical form of waste. Two incinerators with the same operational and regulatory status, even if different types (e.g., fluidized bed versus rotary kiln), burning the same physical form of waste, are to have their capabilities for that physical form of waste combined and reported on the same Form PS.

Each system is classified under a system type that uniquely identifies the system by indicating the primary process within the system or the primary purpose/operation the system performs. For example, a system to remove dissolved metals from wastewater typically includes equalization, pH adjustment, chemical precipitation, flocculation, clarification/settling, and dewatering of the sludge removed from the bottom of the clarifier. The chemical precipitation process best identifies the primary purpose of the treatment system, which is to remove metals from the wastewater. Therefore, the system should be categorized under the system type of chemical precipitation.

Single process systems that occur in multiple units can be reported as one system, aggregating their utilized and maximum operational capacities, if all units have the same:

- Operational status code, and
- Regulatory status code.

If the operational or regulatory status codes are different for any of the units in the system, you must report that unit as a separate system on a separate Form PS.

The following examples demonstrate system identification. Figure 1 shows a simple hazardous wastewater treatment system. Hazardous waste can enter the three unit processes for treatment at only one point, the chemical precipitation process. Therefore, there is only one hazardous waste treatment system. The system consists of chemical precipitation, clarification/settling, and sludge dewatering (filter press) processes. The chemical precipitation process best identifies the primary purpose of the treatment system; therefore, the system should be categorized under the system type of chemical precipitation. Note that by this method, recycle streams and nonhazardous waste streams do not affect system identification.

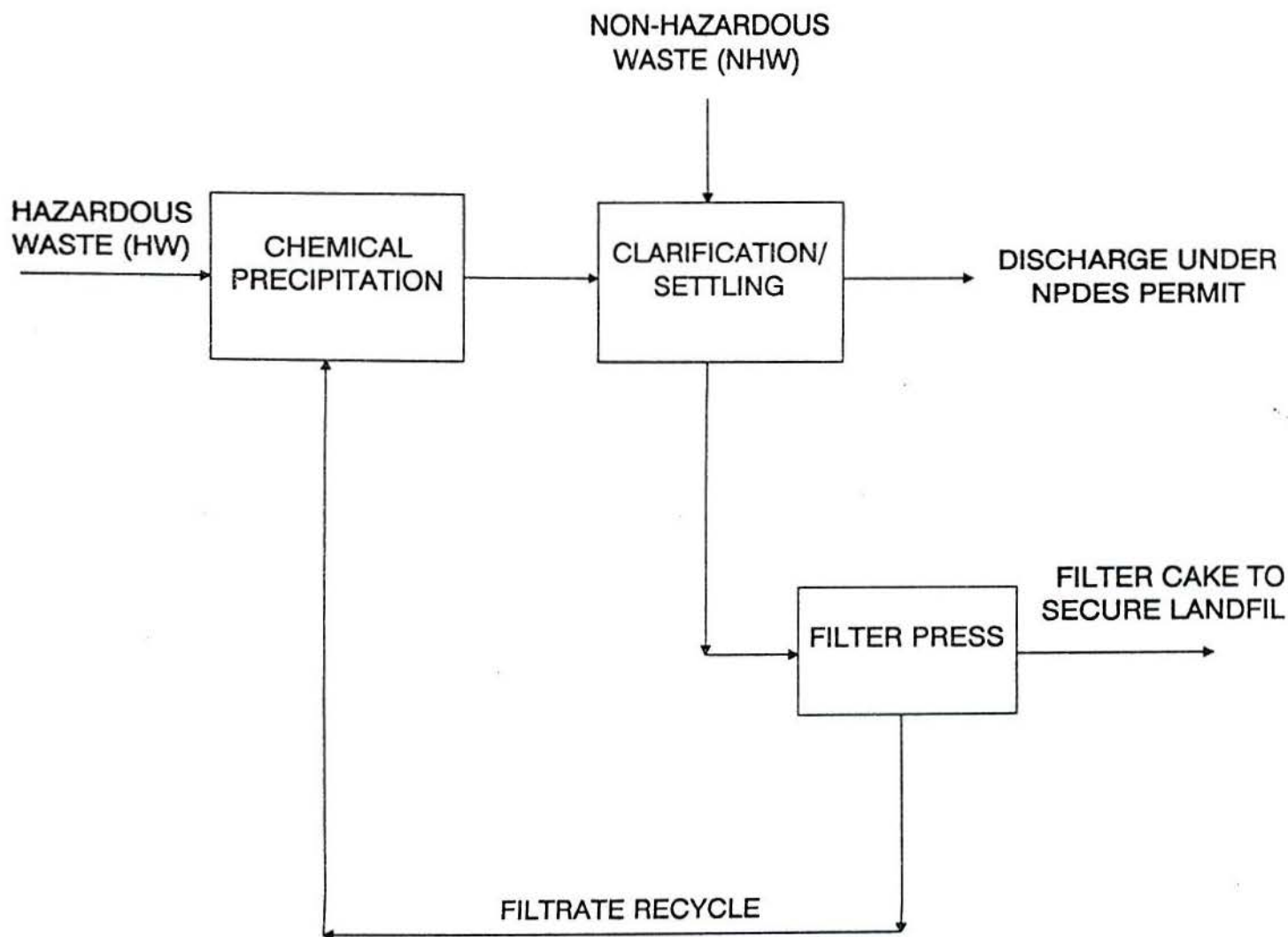


FIGURE 1. FLOW DIAGRAM OF A SIMPLE SYSTEM

Figure 2 depicts three hazardous waste treatment systems. Three hazardous waste entry points exist at three different units, which perform three different processes. The first waste treatment system consists of chromium reduction, chemical precipitation of chromium, settling, and sludge dewatering processes. Because the primary purpose of the system is treating and removing chromium wastes, the system type is chromium reduction followed by chemical precipitation. The second waste treatment system consists of a cyanide oxidation process followed by chemical precipitation of metals, and settling and dewatering of the resultant treatment sludge. Since the primary purpose of the system is destroying cyanide wastes and removing metals from the same waste stream, the system type is cyanide oxidation followed by chemical precipitation. The third is a treatment system for a general metal-containing waste consisting of chemical precipitation of metals, settling, and sludge dewatering. The system type for this system is simply chemical precipitation. Note that the three systems share some of the same unit processes. These three systems may be competing for the capacity of the shared units. Competition for the capacity of a shared unit should be considered when calculating the maximum operational capacity for each system.

At first glance, Figure 3 seems to show two systems because there are two hazardous waste entry points. On closer examination, it can be seen that the two waste streams feed into two different tanks that conduct the same process in parallel. For purposes of reporting system capacity, these two units are considered as one process, with the utilized and maximum capacities of the "aggregated unit" equal to the sum of the utilized and maximum capacities of both units. Therefore, Figure 3 depicts only one hazardous waste treatment system.

Note: If the treatment of nonhazardous waste generates a hazardous waste sludge, only the management of the sludge is reported on Form PS and the system type would fall under the category of sludge dewatering. If sludge dewatering is a unit process within a hazardous wastewater treatment system as in the above examples, the sludge dewatering is not reported on its own Form PS.

Note: Closed loop and totally enclosed treatment systems do not require a Form PS. To be considered a closed-loop recovery system, a recovery unit must meet ALL of the following criteria:

- Secondary materials must be returned to the original process;
- The production process to which these secondary materials are returned must be a **primary production process**; and
- The secondary material must be returned as feedstock to the original production process and must be **recycled as part of the process**.

Additional information on closed-loop recovery can be found in 50 FR 639, January 4, 1985.

A treatment unit is **totally enclosed** if it is directly connected to an industrial production process and is constructed and operated in a manner that prevents the release of any hazardous waste or any constituent into the environment during treatment.

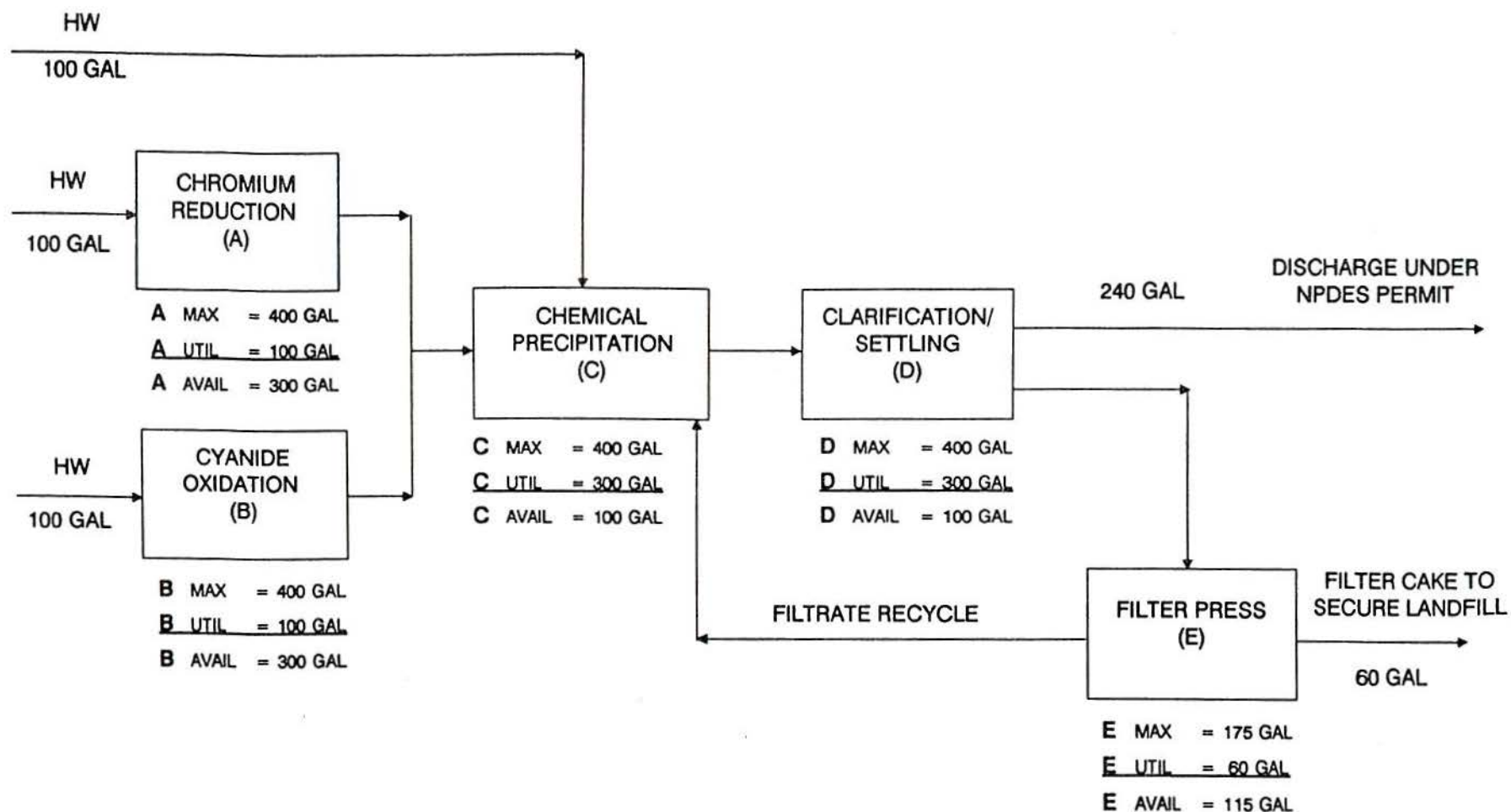


FIGURE 2. FLOW DIAGRAM OF THREE SYSTEMS WITH UNIT PROCESS CAPACITIES

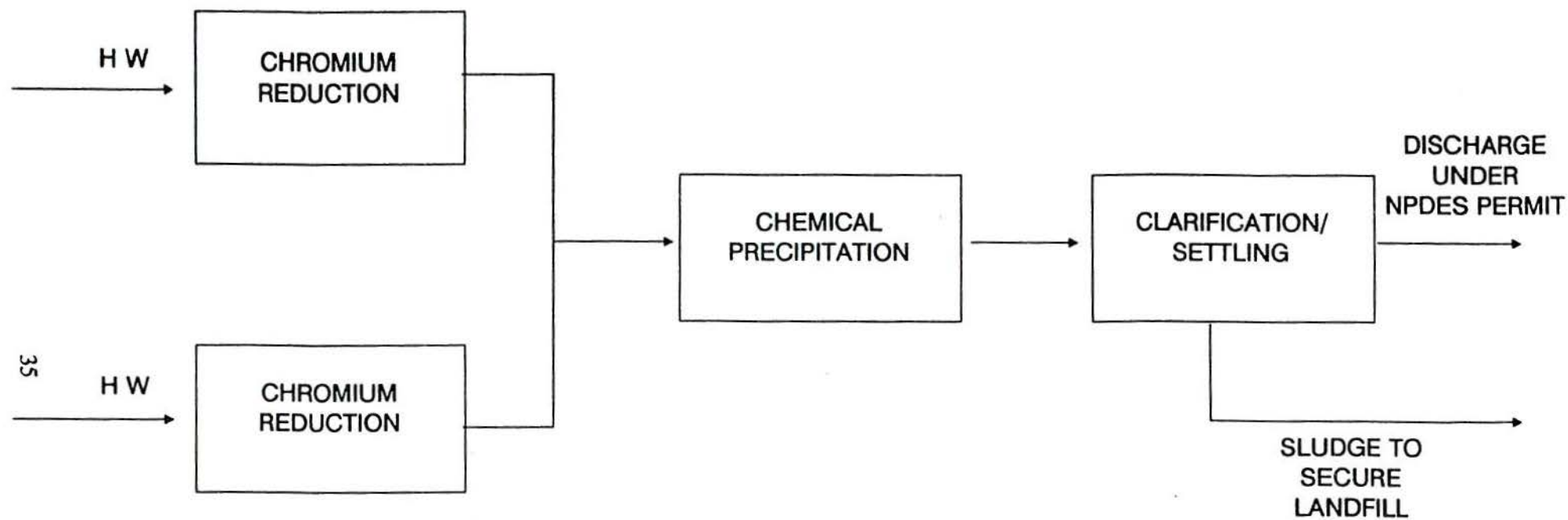


FIGURE 3. FLOW DIAGRAM OF ONE SYSTEM WITH TWO UNITS CONDUCTING THE SAME PROCESS

Section I: System Identification

This section requests descriptive information on the processes, units, and status of one TDR system that is existing, planned, or under construction at the site during 1989.

Box A: Waste Treatment, Disposal, or Recycling System Description

Describe the processes in this system, the types of units used to carry out the processes, and the types of wastes managed.

Examples:

"Incineration of D001 waste sludge and nonhazardous refuse in two rotary kiln incinerators."

"Solvent recovery and chemical treatment in tanks."

Box B: System Type

Review the System Type codes and enter the code that most appropriately describes the system. A discussion of system identification is found on page 31.



System Type Codes, page 83.

Box C: Regulatory Status Code

Review the codes listed below and enter the code that best describes the regulatory status of the system during 1989.

<u>Code</u>	<u>Regulatory Status</u>
01	System is RCRA regulated; all units in the system are subject to RCRA permitting standards
02	System is not RCRA regulated; no units are subject to RCRA permitting standards but system's discharge is subject to NPDES permitting standards
03	System is not RCRA regulated; no units are subject to RCRA permitting standards but system's discharge is subject to POTW permit/approval
04	System is not RCRA regulated; no units are subject to RCRA permitting standards but system is subject to UIC permitting standards
05	System includes both RCRA regulated and RCRA exempt units and the system's discharge is subject to NPDES permitting standards (can occur only in multiple process systems)
06	System includes both RCRA regulated and RCRA exempt units and the system's discharge is subject to POTW permit/approval (can occur only in multiple process systems)
07	System is exempt from regulation
08	System is State-only regulated for hazardous waste activities
09	System includes both RCRA regulated and RCRA exempt units and the system is also subject to UIC permitting standards
10	Regulatory status of the system is unknown
11	Other regulatory status (Specify in Comments)

Section I (Continued)

Box D: Operational Status

Review the codes listed below and enter the code that best describes the operational status of the system at the end of 1989.

<u>Code</u>	<u>Operational Status</u>
01	Operational (includes routine downtime for standard operating procedures, slack demand, and normal maintenance)
02	Temporarily idle (e.g., nonroutine downtime such as major system repair)
03	Permanently closed (For RCRA regulated systems, permanently closed means formal RCRA closure has taken place or hazardous waste operations have ceased pending formal closure. For systems that are exempt from RCRA permit requirements, permanently closed means hazardous waste operations have ceased permanently). Use only if system operated in 1988 and/or 1989
04	Under construction (includes operational testing, waiting period for permit)
05	System planned but not yet under construction
06	Other operational status (Specify in Comments)

Box E: Unit Types

Review the codes listed below and enter the codes that best describe the types of units in the system. If more than two unit types are included in the system, use the Comments section to continue the entry and reference Section I, Box E.

<u>Code</u>	<u>Unit Types</u>
01	Tank (Includes distillation columns, filter presses, sumps, clarifiers and other tanks)
02	Container
03	Incinerator (e.g., rotary kiln, liquid injection, fluidized bed, etc.)
04	Industrial kiln, furnace, or boiler
05	Waste Pile
06	Underground Injection Well
07	Landfill
08	Land Application/Land Treatment
09	Surface Impoundment
10	Other type of unit (Specify in Comments)

Section II: Capacity

This section requests information on the quantity of influents, residuals and effluents associated with the TDR System that operated at any time during 1989 (operational status codes 01, 02, or 03).



Skip to Section III if this Form PS is for a system that is planned or under construction.

Box A: 1989 Influent Quantity

Box A has four parts. Each should be completed according to the instructions below. Right justify all entries.

- **TOTAL:** Enter the total quantity of waste entering the system during 1989. Include all waste influents, both RCRA hazardous and nonhazardous. Exclude quantities of catalysts, reagents, and other nonwaste materials that enter the system as part of a management process.

For a system that shares units or processes with another system: Enter the total quantity of waste influent to the system, excluding any influent quantity that originates in another system with which a unit or process is shared. For example, in completing Form PS for the "chemical precipitation" system type in Figure 2 on page 34, only the quantity of metal-bearing waste (100 gal) entering the chemical precipitation process would be entered "in Box A. The quantity of chromium-bearing waste that flows into the "chrome reduction followed by chemical precipitation" system type and the quantity of cyanide and metal-bearing waste that flows into the "cyanide oxidation followed by chemical precipitation" system type would not be counted as influent to the "chemical precipitation" system type because they originate in different systems (even though they also flow into the first process of the "chemical precipitation" system).

- **RCRA:** In the space labeled "RCRA," enter the amount of the Total influent to the system that was RCRA hazardous waste. This should always be equal to or less than Total.
- **UOM:** Enter the UOM (unit of measure) Code for the influent quantities reported in Box A. Quantities must be reported in one of the units of measure listed below. If a volumetric measure (gallons, liters, or cubic yards) is selected, the density of the waste must also be reported in Box A.

<u>Code</u>	<u>Unit of Measure</u>
1	Pounds
2	Short tons (2,000 pounds)
3	Kilograms
4	Metric tonnes (1,000 kilograms)
5	Gallons
6	Liters
7	Cubic yards

(Continued on next page)

Section II (Continued)

Skip to Box B if you entered code 1, 2, 3, or 4.
Continue to DENSITY if you entered code 5, 6, or 7.

- **DENSITY:** Complete density only if you entered code 5, 6, or 7. Provide the density in either pounds per gallon (lbs/gal) or specific gravity (sg) and check the appropriate box. If density is unknown, enter "DK" in the density field.

Box B: 1989 Maximum Operational Capacity

Box B asks for the 1989 maximum operational capacity. This is defined differently, depending on the type of TDR processes that constitute the system:

- **Landfill system** (including any systems to be closed as landfills)
 For a landfill system, maximum operational capacity is defined as the quantity of hazardous and nonhazardous waste that can enter the system over its remaining lifetime. Exclude quantities of non-waste materials used for daily and final cover. Assume the waste is of the same type as that disposed in the system during 1989. If the system includes multiple units or cells, sum the maximum quantities across all units in the system. Report in the same UOM as Box A.
- **Flow System** (treatment, recovery, or disposal systems not included above)
 For all other systems the maximum operational capacity is the maximum possible quantity that could have entered the system assuming all of the following:
 - No change in equipment
 - An unlimited supply of waste of the same typical mix managed in 1989
 - Willingness to add additional shifts
 - Necessary routine downtime
 - Effects of other systems sharing the same units and competing for capacity
 - Permit limits
 - Regulatory limitations

Report in the same unit of measure as Box A.

Note: For a flow system that shares units or processes with another system, the operational capacity entered should reflect any limitations in capacity caused by shared use of units or processes by other systems. The maximum capacity of the shared unit(s) should be proportioned to each of the systems of which it is a part based on the amount of influent into the process contributed by each system to avoid double counting of capacity. For example, in Figure 2 the maximum operational capacity of the chemical precipitation unit should be considered to be 133 gallons for each of the three systems, all of which utilize the process equally.

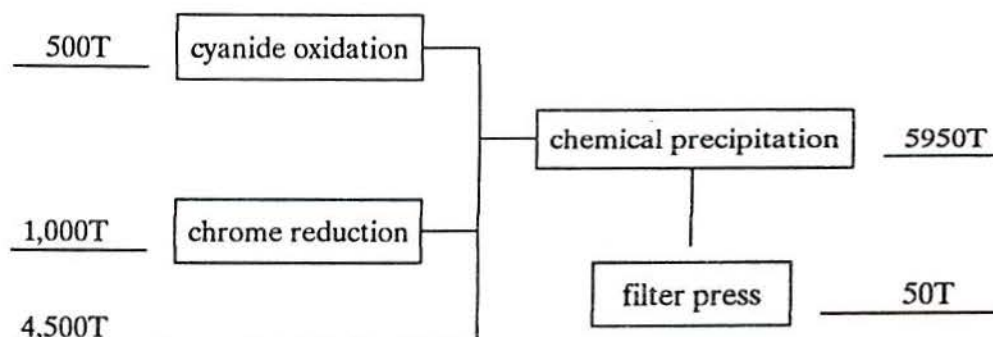
As in Box A both Total and RCRA quantities are required. The unit of measure should be the same as in Box A.

Section II (Continued)**Box C: 1989 Liquid Effluent Quantity**

Liquid effluent includes, but is not limited to, NPDES and POTW discharges (nonhazardous waste), incinerator scrubber water and landfill leachate. (The last two may or may not be hazardous waste depending on whether listed hazardous waste was burned in the incinerator or placed in the landfill or whether the scrubber water or leachate meet any of the characteristically hazardous criteria.) Box C has four entries similar to Box A.

- **TOTAL:** Enter the total quantity of liquid effluent from the system, including all RCRA hazardous, state hazardous, and nonhazardous waste. Do not include quantities recovered for reuse (product). For systems which share units the liquid effluent should be proportioned among the systems sharing the same units based on the influent quantities. (See following example.)
- **RCRA:** Enter the amount of RCRA hazardous liquid residuals (should always be equal to or less than "Total").
- **UOM and DENSITY** should be reported following the directions for Box A.

Example:



	<u>Influent</u>	<u>Percentage of influent</u>	<u>Proportion of effluent</u>
chemical precipitation	4,500	75.0	4,463 (75% * 5,950)
cyanide oxidation	500	8.3	494
chrome reduction	<u>1,000</u>	<u>16.7</u>	<u>993</u>
Total	6,000	100%	5,950

Note: Each hazardous waste liquid effluent must be reported on a new Form GM. If multiple systems generate only one residual, only one Form GM is required for that residual.

Section II (continued)**Box D: 1989 Solid/Sludge Residual Quantity**

Solid/sludge residuals are nonliquid residuals from the management of hazardous waste. Depending on the management system and wastes managed, residuals can be hazardous or nonhazardous. Box D has the same four parts as Box C and should be completed following Box C instructions, replacing liquid effluent with solid/sludge residual.

Note: A Form GM must be completed for each RCRA hazardous residual. If multiple systems generate one residual only, one Form GM is required for that residual.

Box E: Limitations on Maximum Operational Capacity

Use the following codes to indicate any limits on the maximum operational capacity reported in Box B. Review the codes listed below. Enter, in descending order of importance, up to three codes. If a limiting factor is the shared use of the system's processes, enter code 06 -- shared use or processes with other systems.

<u>Code</u>	<u>Limitations on Capacity</u>
01	Operating permit
02	Compliance with permit standards
03	Other state or local regulatory limitations
04	Planned maintenance downtime
05	Number of shifts operated per year
06	Shared use of units or processes with other systems
07	Other physical factors
08	Other limitations on capacity (Specify in Comments)
09	No limitation beyond engineering design

Box F: Commercial Availability Code

Review the codes listed below. Enter the code that best describes the availability of the system for commercial hazardous waste management.

<u>Code</u>	<u>Commercial Availability</u>
1	The system is not available for commercial hazardous waste management
2	The system is available only to firms owned by the same company
3	The system is available to a limited group of establishments for commercial hazardous waste management (specify limitations in the comment section)
4	The system is available to any firm or establishment for commercial hazardous waste management

Section II (continued)**Box G: Percent Capacity Commercially Available**

If the Commercial Availability Code reported in Box F is 3 or 4, enter in Box G the estimated percentage of the maximum operational capacity that is commercially available for hazardous waste management. If you entered code 1 or 2 in Box F, enter zero (0) percent in Box G.

Calculate this entry as follows:

_____ (Amount of capacity available for commercial use)

divided by

_____ (Maximum operational capacity)

equals

_____ x 100 = |__|__|__| % (Enter this number in Box G)

Section III: Future/Planned Capacity

This section requests information on the maximum operational capacity of any future systems that will come on-line and any planned changes in capacity for systems operating in 1989.

Box A: Planned Change in Maximum Capacity

Is any change in the system's maximum operational capacity underway or planned in the future?

Check "Yes", if a change is planned in this system's maximum operational capacity reported in Section II or if a new system will be coming on line. Check "No", if no change is planned in this system's maximum operational capacity.



**Continue to Box B if you checked "Yes".
This Form is Complete if you checked "No".**

If more than one change in the system's capacity will occur, attach a second copy of Form PS leaving blank all entries except Section III. Note in the Comments section of each page "Sec. III, system type __ continued on supplemental page."

Note: If no change in total capacity is planned but the commercial status or the percentage of RCRA-hazardous waste treated will change, check "Yes" and continue.

Box B: New Maximum Operational Capacity

This box requests the new maximum operational capacity after the change indicated in Box A. This capacity is broken down into Total (Both RCRA Hazardous and Nonhazardous) and RCRA. A UOM Box is provided (see Section II, Box A).

Section III (Continued)

- For landfill systems, if additional cells are being built or are planned, add the new volume to the capacity in Section II, Box B and report the resulting volume in Section III, Box B. For systems that are planned or under construction, put the new capacity in the box (RCRA and Total).
- For flow systems report the new maximum operational capacity (RCRA and Total).

Box C: Planned Year of Change

Enter the year when the planned change or new system will be operational.

Box D: Future Commercial Availability Code

Review the codes listed below. Enter the code that best describes the availability of the system for commercial hazardous waste management after the planned change in capacity.

Code Commercial Availability

- 1 The system will not be available for commercial use
- 2 The system will be available only to firms owned by the same company
- 3 The system will be available to a limited group of establishments for commercial use
- 4 The system will be available to any firm or establishment for commercial use

Box E: Percent of Future Capacity Commercially Available

If the Future Commercial Availability Code reported in Box D is 3 or 4, enter in Box E the estimated percentage of the operational maximum capacity that will be commercially available for hazardous waste management. If you entered code 1 or 2 in Box D, enter zero (0) percent.

Calculate this entry as follows:

_____ (Amount of future capacity available for commercial use)

divided by

_____ (Future capacity)

equals

_____ x 100 = |__|_|_| % (Enter this number in Box E)

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DEFINITIONS

Accumulation	<p>A site that does not hold RCRA Interim Status or a RCRA permit (i.e., a site that does not have active RCRA Part A or Part B permit applications) may accumulate hazardous waste for a short period of time before shipping it off site. The waste must be accumulated in either tanks or containers; it may not be accumulated in surface impoundments.</p> <p>Generators of more than 1,000 kg (2,200 lbs) of hazardous waste per month may accumulate their waste for up to 90 days before shipping it off site.</p> <p>Generators of 100 kg (220 lbs) to 1,000 kg (2,200 lbs) of hazardous waste per month may accumulate their waste for up to 180 days before shipping it off site. If the nearest treatment, storage, disposal, or recycling facility to which they can send their waste is more than 200 miles away, they may accumulate their waste for 270 days.</p>
Activity/Production Index	<p>The activity/production index is a measure of changes in production, activity, economics and/or other factors that affected the quantity of hazardous waste generated in 1989, compared to 1988. The Index is used to distinguish between inter-year hazardous waste generation quantity changes resulting from waste minimization activity, and changes that were attributable to production, activity, economics or other factors.</p>
Acute Hazardous Waste	<p>Acute hazardous waste is any hazardous waste with an EPA Waste Code beginning with the letter "P", or any of the following "F" codes: F020, F021, F022, F023, F026, and F027. These wastes are subject to stringent quantity standards for accumulation and generation.</p>
Authorized State	<p>An authorized State is one which has obtained authorization from EPA to direct the RCRA program.</p>
CAS Number	<p>The Chemical Abstracts Service (CAS) number identifies a toxic chemical by a unique eight-digit number.</p>
CBI	<p>Confidential Business Information (CBI) refers to information a facility does not wish to make available to the general public for competitive business reasons. CBI may be claimed for certain information in your report. A claim of CBI may be made in accordance with 40 CFR Part 2, Subpart B.</p>

Note: Definitions are not legally binding. Refer to Title 40 of CFR for precise legal wording.

CESQG

A RCRA Conditionally Exempt Small Quantity Generator, CESQG, is defined by the following criteria:

(a) in every single month during 1989, the site generated no more than 100 kg (220 lbs) of hazardous waste, **and** no more than 1 kg (2.2 lbs) of acute hazardous waste, **and** no more than 100 kg (220 lbs) of material from the cleanup of a spillage of acute hazardous wastes; **and**

(b) the site accumulated at any time during 1989 no more than 1,000 kg (2,200 lbs) of hazardous waste, **and** no more than 1 kg (2.2 lbs) of acute hazardous waste, **and** no more than 100 kg (220 lbs) of material from the cleanup of a spillage of acute hazardous wastes; **and**

(c) the site treated or disposed of the hazardous wastes in a manner consistent with regulatory provisions.

CFR

The Code of Federal Regulations, or CFR, contains the detailed regulations, written by Federal Agencies, to implement the provisions of laws passed by Congress. Regulations in the CFR have the force of Federal law.

Characteristic Waste

A waste classified as hazardous because it is ignitable, corrosive, reactive, or toxic as determined by the EP toxicity test is a characteristic waste. It has an EPA Waste Code in the range "D001" to "D017". Each of these four characteristics are defined in 40 CFR 261.20 Subpart C.

Delisted Wastes

Delisted wastes are site-specific wastes that are excluded from reporting under 40 CFR 260.20 and 260.22. A waste at a particular generating site may be excluded or delisted from the lists of hazardous waste in Subpart D of Part 261 by petitioning the EPA Administrator for a regulatory amendment.

Disposal

Disposal means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on any land or water so that such hazardous waste may enter the environment or be emitted into the air or discharged into any waters including ground water.

EPA

The Environmental Protection Agency, EPA, is also called USEPA, for United States Environmental Protection Agency. Established in 1970 by presidential executive order, it brings together parts of various government agencies involved with the control of pollution. Note that some State environmental authorities may be called EPA also, as in Illinois EPA.

Note: Definitions are not legally binding. Refer to Title 40 of CFR for precise legal wording.

EPA Identification Number	The EPA identification number is a 12-character digit number assigned by either EPA or the authorized State to each generator, transporter, and treatment, storage, or disposal facility. Facilities which are not generators but anticipate possible generation activity may also apply for and receive an EPA ID number. The first two characters are alphabetical and stand for the state in which the site is physically located. The third character can be either alphabetical or numeric. The remaining nine characters are always numeric.
Excluded Wastes	A list of wastes that are excluded from regulation under 40 CFR 261.4 and 261.3(c)(2)(ii).
Facility	In this report, a facility is a site which manages hazardous wastes on site. Facilities are also called "TSDs" or "TSDRs."
Form 8700-12	Form 8700-12 is the Hazardous Waste Activity Notification Form. (See Generator Notification Form.)
Form R	Form R is also called the Toxic Chemical Release Inventory (TRI) Report form. This form is required by Section 313 of the Emergency Planning and Community Right-to-Know Act (Title III of the Superfund Amendments and Reauthorization Act of 1986), Public Law 99-499. The information on this form was last collected for calendar year 1988 with the report due by July 1, 1989.
Generator	A generator is a site or mobile source whose actions or processes produce hazardous waste.
Generator Notification Form	Every site which generates, treats, stores, or disposes of hazardous waste must inform EPA of its hazardous waste activity by filing EPA Form 8700-12, Notification of Hazardous Waste Activity (Hazardous Waste Activity Notification Form). After receiving the notification form, EPA assigns an identification number (EPA ID) to the site.
Hazardous Waste	By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. It is a solid waste which possesses at least one of four characteristics (ignitability, corrosivity, reactivity, and EP toxicity), or appears on special EPA lists. A hazardous waste is regulated under Subtitle C of RCRA. The regulatory definition of hazardous waste is found in 40 CFR 261.3.
Listed Wastes	Listed wastes are those wastes specifically named in 40 CFR 261.3. These wastes are listed as hazardous under RCRA but have not been subjected to the toxic characteristics listing process because the dangers they present are considered self evident. They bear EPA Waste Codes beginning with the letters F, P, U, or K.

Note: Definitions are not legally binding. Refer to Title 40 of CFR for precise legal wording.

LQG

A RCRA Large Quantity Generator, or LQG, is defined by the following criteria:

(a) generated in one or more months during 1989, 1,000 kg (2,200 lbs) or more of hazardous waste, or more than 1 kg (2.2 lbs) of acute hazardous waste, or more than 100 kg (220 lbs) of acute hazardous spill debris; or

(b) accumulated at any time during 1989 more than 1 kg (2.2 lbs) of acute hazardous waste, or 100 kg (220 lbs) of acute hazardous spill debris.

NPDES

National Pollutant Discharge Elimination System, or NPDES, is a provision of the Clean Water Act which prohibits discharge of pollutants into waters of the United States unless a special permit is issued by EPA, a State, or (where delegated), a tribal government on an Indian reservation.

Operator

An operator is the person responsible for the overall operation of the site in question.

Opportunity Assessment

An opportunity assessment is a procedure that identifies practices that can be implemented to reduce the generation of hazardous waste (source reduction) or the quantity that must subsequently be treated, stored, disposed of, or recycled.

Part A Permit Application

The first step in obtaining a RCRA permit to treat, store, or dispose of hazardous waste is to file a Part A Permit Application. This application defines the processes to be used for treatment, storage, and/or disposal of hazardous waste; the design capacity of such processes; and the specific hazardous wastes to be handled at the applying facility. A Part A application must have been filed to obtain interim status to allow facilities existing prior to promulgation of the RCRA regulations to continue operations until their final permit is issued. Thus, if the site has either interim status or a final RCRA permit to handle hazardous waste, a Part A application has been submitted for the site.

Part B Permit Application

The second step in obtaining a RCRA permit to treat, store, or dispose of hazardous waste is to file a Part B Permit Application. To obtain a permit, a site must go through a lengthy process of providing EPA with information about the hazardous waste treatment, storage, and disposal facilities that will be at the site. The Biennial Report respondent should know whether or not the site has completed the Part B permit application.

Note: Definitions are not legally binding. Refer to Title 40 of CFR for precise legal wording.

POTW	A POTW, Publicly Owned Treatment Works, is a waste treatment works owned by a State, unit of local government or Indian tribe usually designed to treat domestic wastewaters.
RCRA	The Resource Conservation and Recovery Act (RCRA) is the Federal statute that regulates the generation, treatment, storage, disposal, or recycling of solid and hazardous waste.
RCRA Interim (Permit) Status	RCRA interim status is the period during which treatment, storage and disposal facilities coming under RCRA in 1980 are temporarily permitted to operate while awaiting denial or issuance of a permanent permit. Permits issued under these circumstances are usually called "Part A" and "Part B".
RCRA Permit	A site is said to have RCRA permit if it has submitted both a RCRA Part A permit application and a RCRA Part B permit application, and has had the Part B permit application approved.
RCRA Regulated Units	RCRA regulated units are units which treat, store, or dispose of hazardous waste and are subject to regulation (i.e., required to have, or be covered by, a RCRA permit). Interim Status Permits are included. Excluded are containers and tanks used exclusively for short-term accumulation exempted under 40 CFR 262.34.
Recycling	The process of minimizing the generation of waste by recovering usable products that might otherwise become waste. It also refers to the reclamation of useful constituent fractions within a waste material or removal of contaminants from a waste to allow it to be reused. As used in this report, recycling implies use, reuse, or reclamation of a waste, either on site or off site, after it has been generated.
Residual	Residual is the amount of a pollutant remaining in the environment after a natural or technological process was taken place, e.g., the sludge remaining after initial wastewater treatment, or particulates remaining in air after the air passes through a scrubbing process.
Respondent	A site that must complete at least one particular form is a respondent.
Site	In this report, site refers to any holder of an EPA Identification Number. A site may be a "generator", a "facility" (or "TSDR facility"), or both, or a non-regulated facility which has conservatively requested and received an EPA ID number.
Sanitary Sewer	A channel or conduit that carries household, commercial, and industrial wastewater from the source to a treatment plant or receiving stream.

Note: Definitions are not legally binding. Refer to Title 40 of CFR for precise legal wording.

Sludge	Sludge is a semi-solid residue from any number of air or water treatment processes. Sludge can be a hazardous waste.
Solid Waste	Solid waste is solid, semi-solid, liquid or containerized gaseous material which is discarded and/or has served its intended purpose, including garbage, refuse or sludge which is not specifically exempted. Wastes exempted from being considered solid wastes are materials found in domestic wastewater, irrigation return flows, point source discharges regulated under the Federal Clean Water Act, in-situ mining wastes, and Atomic Energy Commission source, special nuclear, or by-product material.
Solvent	A solvent is a substance (usually liquid) capable of dissolving or dispersing one or more other substances. These include, but are not limited to, the non-spent materials listed in EPA Waste Codes F001 through F005.
Source Code	The source code describes the production or service process associated with generation of waste.
Source Reduction	Source reduction is the reduction or elimination of waste at the source, usually within a process. Source reduction measures include process modifications, feedstock substitutions, improvements in feedstock purity, housekeeping and management practices, increases in the efficiency of machinery, and recycling within a process. Source reduction implies any action that reduces the toxicity or the amount of waste exiting a process.
SQG	<p>A RCRA Small Quantity Generator (SQG) is defined by the following criteria:</p> <ul style="list-style-type: none"> (a) in one or more months the site generated more than 100 kg (220 lbs) of hazardous waste, <u>but in no month did the site:</u> (1) generate 1,000 kg (2,200 lbs) or more of hazardous waste, or; (2) generate 1 kg (2.2 lbs) or more of acute hazardous waste, or; (3) generate 100 kg (220 lbs) or more of material from the cleanup of a spillage of acute hazardous waste; and (b) the site accumulated at any time during 1989 no more than 1 kg (2.2 lbs) of acute hazardous waste and no more than 100 kg (220 lbs) of material from the cleanup of a spillage of acute hazardous waste; and (c) the site stored its wastes in tanks or containers in a manner consistent with regulatory provisions.

Note: Definitions are not legally binding. Refer to Title 40 of CFR for precise legal wording.